INDONESIAN HIGH VALUE FOOD PRODUCT

MARKET ANALYSIS

By

SRI REJEKI MUJI ANDAYANI

Sarjana Agricultural Engineering
Bogor Institute of Agriculture
Bogor, Indonesia
1988

Master of Science
Oklahoma State University
Stillwater, Oklahoma
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Thesis Approved:

David A. Tilley

Thesis Adviser

John R. Wingender, Jr.

Raymond J. Schatzer

Shida R. Henneberry

Thomas C. Collins

Dean of the Graduate College

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CHAPTER I

INTRODUCTION

Japan, the United States, Singapore, Australia, New Zealand and other countries are interested in exporting to Indonesia because of its potential as a growing market with increasing purchasing power. Food products are identified as having great potential. Indonesia together with Thailand, Philippines and Malaysia (ASEAN-4) are ranked number 8 of the ten best market prospects for U.S. consumer food exports after Japan, Canada, Mexico, Hong Kong, Taiwan, South Korea, and the European Economic Community (Agexporter, 1994). Income levels in ASEAN-4 countries are still low but are among the fastest growing in the world. Based on the import value, Japan, the United States, the Republic of Korea and Singapore were the major food exporting countries to Indonesia in 1992. Moreover, U.S. exports of agricultural products have increased over the last six years. The increase was dominated by intermediate and consumer-oriented agricultural products or high value food products (HVFP). Assessment of market advantages, market disadvantages, marketing practices, market competition, business requirements, and government regulations are needed for U.S. companies to successfully penetrate the Indonesian food product market. The demand for HVFP in Indonesia is hypothesized to be related to economic reform, income growth, tourism, and foreign investment in Indonesia. Indonesia's trade deregulation and reform have had important impacts on U.S. food exports in Indonesia.

This evaluation of the impacts includes an environmental analysis of the Indonesian food market that emphasizes food marketing institutions and import demand analyses. An environmental analysis of the Indonesian food product market and buyers' needs is presented first. A market survey using questionnaires was conducted with importers, traders, hotel buyers, and restaurant buyers as respondents. The market survey included information about market advantages and disadvantages, market size, potentials, trends, product mix, marketing practices, decision making processes used by the importers, traders, restaurants, and hotels. Following the description of the market environment, import demand analyses for fruit, meat, and general groceries are used to estimate HVFP price and cross-price responsiveness to prices from major HVFP supplying countries.

Objectives

The objectives are :

1. To present a comprehensive analysis of the key factors influencing the marketing environment for high value food products (HVFP) in Indonesia.

2. To determine Indonesia's import demand responsiveness to price, competitors prices and expenditure for oranges, apples, and grapes imported from United States and its competitors. The result show the effects of increased expenditure on U.S. and competitors market shares as well as the degree of price competition between supplying countries.

3. To provide information about Indonesian beef import trade, restrictions, and prospects, to provide information about the responsiveness of beef import demand to prices and expenditures, and to assess the competition among beef exporters to Indonesia.

CHAPTER II

MARKET ENVIRONMENT FOR HIGH-VALUE FOOD PRODUCTS IN INDONESIA

An environmental analysis of a market is an important step in developing a marketing plan and is presented in chapter II. The environmental analysis becomes the foundation for marketing objectives, strategies to achieve the objectives, and tactical decision making. Because the market in Indonesia is changing so rapidly, updating this analysis will continue to be critical if it is to be accurate. The framework presented and the sources of information which are documented should provide future analysts with the information they need to update and modify this analysis as conditions warrant.

The framework proposed for the environmental analysis of the Indonesian market includes the following: 1) cultural analysis; 2) economic analysis; 3) government regulations and economic policies. Following the first three sections, sections containing market audits and competitive market analyses for fruits; tourist, business traveler and away-from-home consumption; and groceries, meats and other products. Each of the market audits and competitive analyses includes information about:

1. market size and growth trends;
2. products, perception by prospective buyers, relative advantage, complexity, problems, and resistance to product acceptance;

3. market, geographic area, transportation and communications system, consumer buying habits, distribution methods, advertising and promotion, pricing strategy; and

4. competitors' products and comparisons to those from the U.S.

The Cultural Analysis, Economic Analysis, and Government and Regulatory Analysis, are primarily based on publically available information or secondary data sources. The market audits and competitive analyses report the results of primary data collection from participants in the food marketing system.

1. CULTURAL ANALYSIS

Indonesia is a country of cultural diversity and multiple language with great differences in social institutions, philosophy, religion, and living conditions. The diverse cultures have been the subject of numerous books. More than 300 major different ethnic groups coexist in Indonesia (Wrigth and Tellei, 1993). Because of the concentration of population and business activity on the islands of Java, Sumatra, and Bali and because the highest income consumers tend to live near the larger cities, cultural traditions of these areas are the focus of this chapter. In addition to these areas, the Indonesian island of Batam located only 20 minutes by boat from Singapore is developing rapidly and deserves special attention because of its rapid hotel expansion and urban development.

Social Institutions

In general, family and extended family relationships are very important in social and business settings in Indonesia. Many business organizations have, at their core, family and extended family ties. These relationships influence with whom business is

done, financial arrangements, business locations, and business diversification. Family or group member entrepreneurs may be provided with capital, office space, manufacturing space, consulting advice, government connections, and business connections to other groups or families. Government relationships are frequently a very important factor influencing business success.

The Javanese culture is important to understand because of the predominance of the Javanese in government. The Javanese predominance in government might be related to the past history when the Dutch colonialized Indonesia (1619-1942). During that time, Javanese nobility preferred government service to becoming a business person or trader. This perception stemmed from the "golden age" of Javanese history and from the traditional Hindu caste system, in which traders held lower status than noblemen, scholars, and warriors (Wright and Tellei, 1993). Javanese people make up the largest ethnic group in Indonesia. Javanese people tend to be heavily involved in most major political decisions. Compared to the U.S., Javanese tend to not be confrontational, do not like to have open arguments, and want to reach amicable consensus. Seldom will you hear the word "no" used in conversation and as a result it is sometimes difficult for Americans to know when they have been told no. In addition, criticism and suggestion to Indonesians, especially to Javanese, should be phrased in a subtle manner. Questions and sometimes rhetorical questions are very effectively used by Javanese to express criticism. Decision making by consensus is preferred.

Because of the cultural diversity, tolerance of alternative religions, races, and ethnic backgrounds is an important principle of Indonesian social order. Open forms of intolerance are not often visible nor are they officially supported. While Islam is the

dominant religion representing 85 percent of the population (National Development Information Office (NDIO), 1992), Indonesia is not an Islamic republic.

Social and ethnic divisions do influence business in Indonesia. In the larger cities on Java, Sumatra and Bali, the Chinese-Indonesian population is heavily represented in the business communities even though they are only about 10 percent of the population (Wright and Tellei, 1993). The Chinese business person in Indonesia is usually male and is frequently well-educated. It is not unusual to meet business people with one or more degrees from U.S., Australian, or European universities. Frequently, their home is located very near their business and sometimes, for smaller businesses, the two are physically connected. Seldom do you find Chinese-Indonesians in civil service positions.

Most Chinese-Indonesian have adopted Indonesian names. This practice makes them no longer enumerated as a distinct ethnic group especially in official data collection. During the turmoil leading to Soeharto's first presidency, in the 1960's many Chinese were reportedly communist sympathizers and were executed. Estimates of the number vary widely. Very little intermarriage between the Chinese-Indonesians and indigenous Indonesian occurs but you will find there is considerable respect among the groups and coalitions are formed between indigenous Indonesians and Chinese-Indonesians. The Indonesian side of the coalition would provide political connections for the enterprise while the Chinese would bring business connections. Many Chinese-Indonesians are also Christian. Development of an indigenous or "pribumi" business class is progressing. President Soeharto's children are very active in the business community and lead several of the larger pribumi business groups (Schwarz).

Other groups heavily represented in commerce include the Batak people of the Lake Toba area of North Sumatra and people from West Sumatra. The Batak tend to be

more direct and less subtle than are the Javanese. Christianity is also more widely practiced in North Sumatra. West Sumatrans have a reputation for frequently being well educated and are often found in leadership positions in education or government.

Legal System

Indonesian law has Dutch origins. The Commercial Code of 1848 regulates the major forms of business organization in Indonesia. Major types of business organization that are regulated by Commercial Code are the basic partnership, the open partnership (Firma), limited partnership (CV), and limited liability company (PT) (Sudjendro, 1991). In addition, foreign joint-venture companies and representative offices are allowed.

The Foreign Capital Investment Law regulates foreign capital investments and operation of foreign companies in Indonesia. In general, the stipulated form for foreign investors is known as a PMA company which is a joint venture with an Indonesia partner in the form of a limited liability PT company. Foreign capital investment is governed primarily by the Capital Investment Coordinating Board (BKPM) (Sudjendro, 1991). Foreign companies may open and maintain a local representative office with the permission of the Indonesian Department of Trade. The representative may be an Indonesian company, an Indonesian individual, or a foreign national, but only one trade representative office is permitted. As a rule, a representative office may only perform auxiliary services by acting as an intermediary, handling promotional activities, and gathering information for a head office abroad. Generally, representative offices are not permitted to perform operational business or trading activities including entering into contracts.

The Basic Agrarian Law of 1960 stipulates that land, including agricultural land, can only be owned by Indonesians. It can neither be owned by a joint venture nor can it be pledged as collateral to secure a loan to a joint venture. This rule presents an impediment to the financing of agricultural joint ventures, which might otherwise be attractive investments (U.S. Department of Commerce, 1992).

The Basic Agrarian Law makes it illegal for Indonesian firms to own land as well. Only individual citizens are accorded that right. Various land use rights are subject to separate regulations. Some of them are the right of exploitation which is normally granted for 35 years, but may be extended to 60 years if the project is satisfactorily managed. The right to construct and own building which is granted for 20 to 30 years and may be renewed by the local government.

Religion

As previously mentioned, 85 percent of Indonesia's people are of the Islamic faith. In 1985, there were 160 million people in Indonesia who were Moslem. Besides Islam, there are three other major religions: Christianity (10 percent), Hindu (2 percent), and Buddhism (NDIO, 1992). Two forms of Christianity, Catholicism and Protestantism, are recognized and differentiated. The word "Christian" is frequently reserved for non-Catholic Christians. Islamic practice in Indonesia is different from that practiced in the Middle East (Kalb, 1991). Indonesian Islamic women frequently wear western or traditional Indonesian dress. Women drive cars and hold cabinet level ranks in government.

Even though Indonesia's Muslim population is the largest in the world, Indonesia is not an Islamic state. The constitution, economic system and law in Indonesia are not

based on the Islamic principles. However, Muslim people in Indonesia practice the five pillars of Islam that are the same as in Middle East. Islam in the Middle East has been influenced by Middle Eastern culture and Islam in Indonesia has been influenced by Indonesian culture. Moreover, in Indonesia, the freedom to choose and freedom to practice any of the five recognized religions are guaranteed by the national constitution.

Principles of Pancasila

One important basic philosophy of the Indonesian people is embodied in a set of five fundamental principles known as "Pancasila". The principles, or "silas" are:

- the belief in one supreme God;
- justice and civility among peoples;
- the unity of Indonesia;
- democracy through deliberation and consensus among representatives; and
- social justice for all.

As a culturally diverse island nation with four major world religions represented among its people, the pancasila philosophy has served as a set of unifying principles to help preserve the identity of the nation. Pancasila is a required component of formal education in Indonesia.

Political Parties and Form of Government

Political stability has been important to economic and business development in Indonesia. Business firms in Indonesia have learned to operate within the government structure and political relationships are important for many firms.

Indonesia is structured as a united and republic nation, with a democratic form of government. The sovereignty of the state is vested in the people and is exercised by the People's Consultative Assembly, the highest authority of the state. The assembly has full authority to elect the president and to determine the General Outline of State Policy (GBHN) to be implemented by the president.

Since independence in 1945, Indonesia has had only two presidents, Sukarno and Soeharto. Soeharto was officially elected president by the Peoples Consultative Assembly (MPR) in March 1968. His election was a recognition of his important role in thwarting an apparent coup attempt by the Indonesian Communist party in September 1965 and the second aborted coup in March 1966. In the second coup, Soeharto was given executive power and authorized as a leading military figure in putting down the coup. Soeharto was reelected in 1973, 1978, 1983, 1988, and 1993. He is staunchly anticommunist and his Golkar (Golongan Karya) party wins most elections by collecting more that 75 percent of the vote in a three-party election. Golkar is the predominant political organization. It was designed as a collective vehicle to voice the political aspirations of the functional groups: the bureaucracy, business and the military (Citibank, 1994). The other two parties are PPP (Partai Persatuan Pembangunan) which is an association of four former Islamic parties, and PDI (Partai Demokrasi Indonesia) which is an association of former nationalist, Protestant and Catholic parties, the Independence Upholder's Party and the People's party.

Government stability is highly desired in Indonesia and the system of government has produced stability. National election campaigns are well organized and coordinated, participation is enthusiastic, and direct conflicts are generally avoided. The 1992 national campaign lasted for one month; there was a one-week moratorium on organized

political activity with all campaign signs removed; and then the election was held. Because of Soeharto's age, concern about who will be the next president is emerging. As of this writing, it is quite likely that Soeharto will be president again although there has been some speculation about possible successors to Soeharto.

Living Conditions, Diet, and Nutrition

Living conditions in Indonesia have improved over the last two decades. Between 1972 and 1990, infant mortality decreased from 134 to 55 per thousand (NDIO, 1992). Life expectancy has risen from 43 to 64 years (NDIO, 1992). Many government programs are designed to improve the quality and availability of health services and family welfare contribute to the success. In addition to health programs, agricultural development that has increased food production and availability and increased educational access have also contributed significantly to improvement of living conditions, especially in rural areas.

The Indonesian government realized the importance of food supply for sustaining and continuing economic development. In addition to improvement in health and well-being of Indonesians, nutrition has become a priority in government development programs. Presidential Decrees 14 in 1974 and 20 in 1979 were to mandate the improvement of diet diversification (Thorbecke and Van der Pluijm, 1993). The basic diet of the Indonesian population is heavily dependent on rice, except in Irian Jaya where sweet potatoes and bananas are preferred. The decrees are important since the diversification of food consumption policy requires all sources of carbohydrates to be included in the self-sufficiency objective.

Based on the national socio-economic survey (SUSENAS) data, the average caloric intake and protein intake changed very little from 1981 to 1987. Average caloric intake in 1981 was 1802 kilo calories per capita per day while protein intake was 40.6 gram per capita per day. In 1987, average caloric intake was 1859 kilo calories per capita per day and protein intake was 44.1 per capita per day (Wirakartakusumah and Arifin, 1990). For the rural population, the average caloric and protein intake in 1980 were 1794 and 42.7 gram per day, respectively, and in 1984 were 1796 kilo calories and 43.3 grams per day in 1984. Table 1.1 shows the Food Balance Sheet for 1987, 1988, 1991, and 1992. Food availability is more than sufficient to meet the needs of the population and has increased every year. The Food and Agriculture Organization's recommendations are 2100 kilo calories and 46 gram of protein per day. Of these, 98 percent of the kilo calories, 89 percent of the proteins and 92 percent of the fat come from vegetable sources. Table 1.2 shows average energy and protein consumption per capita per day based on expenditure classes in 1987.

Several nutritional problems still affect substantial segments of the population in Indonesia. Among those are protein energy malnutrition (PEM), nutritional anemia, vitamin A deficiency, and iodine deficiency. PEM is the most prevalent problem (Thorbecke and van der Pluijm, 1993).

Education and Women's Role

The government's commitment to schooling has made educational expenditures one of the largest portions of annual and five-year budgets. The budget has increased 2 to 3 percent every five years. Recently, every Indonesian child is guaranteed a primary (6 years) and secondary (3 years) education at a state school. The measure of

the success of education programs in Indonesia is the increase in the literacy rate. According to the 1990 population census, the literacy rate of the urban and rural population was 92.4 percent and 80.3 percent as compared to 84.9 and 67.9 percent in 1980 (NDIO, 1992).

In 1979/1980 the number of students aged seven to 24 years totaled 28.33 million (Central Bureau of Statistics). By 1984/85 the number of students within this same age bracket rose to 33.85 million, by 1990/1991 to 41.5 million and by 1993 to 43.5 million. In 1993, of the 43.5 million, 48 percent are women.

As Indonesia's economy has grown, the women work force participation rate also has increased. In 1980, Indonesia had a lower female work force participation rate (33 percent) than Thailand (47 percent), Philippines (39 percent), Singapore (36 percent), and Malaysia (34 percent)(Hoffarth, 1989). The percentage increased to 45 percent by 1987, which is similar to Malaysia (35 percent), Philippines (36 percent), Singapore (39 percent) (Asian Women, 1990). The number of women holding positions in business and government is consistent with Indonesian Islamic practice.

Table 1.1 Indonesian Intake in 1987, 1988, 1991, 1992.

Year	Calories calories per day	Protein grams per day	Fat grams per day
1987			
Total	2577	55.06	49.92
From vegetables	2512	48.48	45.89
From animals	68	6.78	4.11
1988			
Total	2713	60.00	52.49
From vegetables	2643	53.07	48.33
From animals	70	6.93	4.16
1991			
Total	2790	63.39	59.08
From vegetables	2710	54.78	54.55
From animals	80	8.61	4.53
1992			
Total	2994	67.70	70.45
From vegetables	2912	58.59	65.82
From animals	82	9.11	4.63

Source: Statistical Pocket Book of Indonesia, 1990 and 1993.

Table 1.2 Average per capita per day of energy consumption and protein based on expenditure classes in 1987.

Expenditure Class (Rupiah/month)	Energy Kcal	Protein Grams	Total Expenditures Rupiah	Percentage of Population
< 6000	1365	27.4	5378	0.60
6000-7999	1454	31.4	7163	3.29
8000-9999	1541	33.8	9066	7.29
10000-14999	1703	38.1	12535	27.26
15000-19999	1858	43.0	17313	21.77
20000-29999	1984	47.9	24222	21.83
30000-39999	2083	53.1	34393	8.81
40000-59999	2185	57.7	47702	6.08
60000-79999	2280	62.6	68517	1.69
80000-99999	2295	64.5	88759	0.67
> 100000	2541	73.9	145666	0.71
Average	1859	44.1	22125	100.00

Source : Central Bureau Statistics, 1989.
US$1.00=Rp.1653 in 1987.

2. ECONOMIC ANALYSIS

The economic analysis includes sections on the following topics:

a. population, growth, demographics, immigration, labor force;

b. income, distribution, and sources by industry;

c. international trade, products, trends;

d. channels of distribution, brokers, retailers, agents, types of stores, urban vs. rural markets;

e. media availability, costs, and coverage; and

f. tourism, growth, location, and origin of tourists.

Population

According to the official 1990 national census, Indonesia's population that year reached 179 million (NDIO, 1992). Sixty percent of Indonesia population is on Java. Besides Java, Madura and Bali are other islands where the population density in certain areas exceeds 1000 people per square kilometer. Annual population growth has been reduced over the past two decades by the implementation of a comprehensive family program. In 1972, the rate was 2.3 percent. The rate was reduced to 1.97 percent in 1990 and is expected to be 1.6 percent in 1995.

In 1992, growth in the number of individuals entering the work force is estimated at 2.8 percent or about 2.4 million. In 1990, Indonesia's labor force numbered 77.4 million and is expected to reach 83.6 million in 1994 (National Development Information Office, 1992). Realizing that its people is its greatest asset, the government of Indonesia

has emphasized education as an important factor in social and economic development, particularly as a means of overcoming the country's shortage of skilled manpower.

Income Growth and Distribution

The average income in Indonesia is still low, but is among the fastest growing in the world. Since 1988, Indonesia has been able to maintain income growth at about 6 percent per year. However, in 1987, the poorest fifth of the population accounted for 9.2 percent of the total spent on consumption (Economist). In 1976, 54.3 million people or 40.1 percent of population, lived below poverty line. By 1987, that number had declined to 30 million, or 17.4 percent of the population (Central Bureau of Statistics); and by 1990, the number of Indonesians living below the poverty line decreased to 27.2 million people, or 15.1 percent of the population.

Realizing growing tensions over disparities of wealth, a poverty alleviation program became the top priority program for the new cabinet. On April 1, 1994, the government launched the Presidential Instruction Program for Less-Developed Villages known as "Inpres Desa Tertinggal", which will run for three years at a cost of US$206 million a year. If the program works, it is predicted by the officials that the number of Indonesians living below the poverty line will drop to 6 percent by the end of Suharto's current sixth presidential term in 1998 (Cohen, 1994).

International Trade

After Indonesia experienced the benefits of the oil boom of the 1980s, the Indonesian government began emphasizing diversification of exports. Indonesian exports and imports with and without oil decreased following the policy and then increased

(Figure 2.1). The Indonesian economy underwent unprecedented structural changes when, in 1987, non-oil exports surpassed those of oil and gas and experienced double digit growth. In 1986/87, the value of Indonesia's exports from industries other than oil and gas was $6.7 billion. By the end of 1989/90, non-oil exports had more than doubled in value to $14.5 billion. Moreover, imports expanded by 34 percent to $21.8 billion in 1990. This is primarily due to a surge in the inflow of capital and intermediate goods to meet the needs of record levels of new foreign and domestic investment. Indonesia recorded a trade surplus of $5.1 billion in 1990/91 (NDIO, 1992).

The export growth was slowed by global recession and the diversion of resources to meet expanding domestic demand. In 1990, industrial exports comprise over 80 percent of total non-oil exports, and the industrial sector is currently the driving force behind Indonesia's economic growth. Agricultural products and output from mining make up the remainder of the nation's non-oil exports.

In 1992, garments had the highest value of non-oil exports followed by plywood, rubber, textiles and seafood (lobsters, shrimp and prawns) (Bank Indonesia, 1993). However, in 1994, tourism became the fourth biggest earner of foreign exchange and is expected to move up to third place in 1995 behind oil and gas and textiles (McBeth, 1995). Moreover, Indonesia is the world's largest exporter of plywood, a major producer of rubber, textiles and apparel, and a growing exporter of footwear, cement, fertilizer, steel and glassware (NDIO, 1992). Indonesia's principal trading partners include Japan, the United States, members of the European Community and the six nations of the ASEAN group (the Association of Southeast Asian Nations).

Distribution Channels

An important concern for consumer goods and particularly food marketers in Indonesia is distribution. The vast archipelago, income discrepancy, and cultural diversity make Indonesia a difficult distribution challenge. A shortage of good local distributors and restrictions on the ability of foreign investors to own distribution firms have contributed to the problem. Currently, there are 15 or 20 good local distributors of consumer goods (Business Asia, 1994).

The distribution system in Indonesia has been changing rapidly. Traditional distribution involved each supplier having their own distribution system and delivering their product to retailers and restaurants. New "cash and carry" wholesalers such as Makro and centralized distribution by retail chains are becoming more prevalent. There are three types of traditional retailers: government-run pasar or general markets, independent shops (Warung or Toko), and ambulant vendors (kaki lima). The traditional sector frequently serves the needs of the lower classes. As explained by Newman, the process of growth starts from the growth of supermarket chains that respond to the need for convenient one-stop shopping. Once supermarket chains reach a critical mass, typically about 20 outlets, it becomes economical to create a centralized distribution system. This system differs from the traditional type in that suppliers and retail outlets make and accept far fewer deliveries. In centralized systems, there is one warehouse that takes deliveries from several suppliers and delivers several products to several retail outlets. Centralized distribution eliminates individual product distribution networks to supply retailers. Centralized distribution is frequently followed by falling retail prices due to the lower distribution cost (Business Asia, 1994).

Other companies are solving distributional problems differently. Unilever manages its own distribution system and has 250 distributors spread across Indonesia. They work exclusively for Unilever on a contractual basis. Beiersdorf, the German skin care and medical products company, has solved its problems by switching distributors in favor of a local firm with a bigger market reach. Sara Lee has followed Unilever by taking direct control of distribution. Those companies have proved to be successful in increasing their sales. Many importers of refrigerated or frozen products have their own warehouse space and several own their own trucks.

Media

The Indonesian print media market is dominated by the daily newspaper Kompas. In 1994, Tempo magazine was widely read as well. In 1994, publication licenses for Tempo and two other magazines were revoked by the government because of disputes about political reporting. TV advertising, another important media outlet, was banned in January 1981, two months after anti-Chinese and, reputedly, anti-government riots occurred in Central Java (Schwarz, 1990). However, the government's reason for that was to shut out reckless consumerism and avert social instability.

In the 1990's, two of the President Soeharto's children were trusted to pioneer private alternatives to the state television channel, TVRI, but their audience has been reported to be limited. The television advertising ban was also removed and several food companies currently use television advertising. In August 1993, national expansion of commercial TV was begun. There are now five private stations; RCTI, TPI, SCTV, ANteve, and IVM that are busy carving out market segments. Foreign participation in building Indonesia's broadcast industry remains a sensitive subject. In June 1994, a

deregulation package allowed foreign investment in the mass media which was shown to be in conflict with the Press Law of 1982, which expressly forbids foreign ownership of media. Further complicating the market is satellite television reception. Television reception is available in some areas from Australia, Singapore, and Malaysia.

Tourism

Because Indonesia consists of more than 13,000 tropical islands, it represents one of the world's last great frontiers of tourism. A diversity of cultures and traditions is found throughout the islands. The beautiful and graceful surroundings attract many tourist from all over the world to visit Indonesia although the potential for expansion is still great. Evidence of the potential is the tourism growth that has occurred, especially since 1986. A record of one million visitors came to Indonesia in 1987. The number of visitors continues to increase and approached 3 million in 1992. In 1994, the number of tourists reached 4 million (McBeth, 1995). Figure 2.2 shows the total number of tourists who visit every year and Figure 2.3 shows the number of tourists who visit Indonesia based on their nationalities. The countries included in Asia Pacific are Australia, Hong Kong, India, Japan, Korea, New Zealand, and Taiwan. Australia, Japan and Taiwan hold large shares compared to other countries. Visitors from all countries show a steady increase in number nearly every year. In the ASEAN group, visitors from Singapore are the largest number. Indonesia's visitors fall into two categories, the weekenders from Singapore, Malaysia, and Australia and those who take long vacations. The average length of stay per tourist in 1992 was 11.0 nights, slightly decreased from previous years (11.84 in 1991 and 11.82 in 1990).

The government of Indonesia has anticipated the increase of visitors to Indonesia by promoting expansion of hotel capacity 48 percent from 1983 to 1990. Currently, Indonesian companies operate over 400 officially-rated hotels with more than 4,200 rooms. In major cities, these include five-star hotels that match world standards of luxury and comfort. Other accommodations, known as motels or "losmen" which are bed and breakfast type accommodations are found in Indonesia's smaller towns. "Losmen" often cost as little as $5 dollar per night and provide more than 96,000 additional rooms for travelers. A number of major international chains are already established in the Indonesian market, including Hilton, Hyatt, InterContinental, Mandarin-Oriental, Meridien, Sheraton, Regent and Holiday Inn.

The government of Indonesia has also made tourist entry policies, customs and immigration procedures easier. Two-month visas are issued automatically upon arrival to citizens from 31 countries who show proof of intended outbound travel. Moreover, customs and immigration procedures have been streamlined to facilitate entry into Indonesia. Duty exemptions on alcohol (two liters) and tobacco (200 cigarettes) are identical to those in most other countries. Gateway airports have two customs lines; one for visitors with goods to declare and the green light queue for those with only duty-free items. There are four major gateway air terminals; Soekarno-Hatta Airport in Jakarta, Ngurahrai in Bali, Polonia Airport in Medan, and Simpang Tiga Airport in Pekanbaru where direct flights from all over the world are possible. Domestic air travel is available in 33 large cities and in more than 200 smaller cities. The domestic airlines are Merpati Nusantara, Sempati, Bouraq, Mandala and Pelita Airlines. Besides air travel, Indonesia provides several ocean travel gateways: Belawan harbor in Medan, Batu Ampar on Batam Island, Tanjung Priok in Jakarta, Tanjung Perak in Surabaya, Benoa in Bali, Ambon in

the Moluccas, and Bitung in North Sulawesi. Cruise lines, which are becoming increasingly popular in the Pacific and Indian oceans, call regularly throughout the Indonesian Archipelago and include Royal Viking Lines, Cunard, Seven Seas, Ocean Cruise, Oriental and CTC. Seven modern passenger ships operated by the state owned PT Pelni Shipping Company transport the majority of inter island travelers.

As a result of increases in the tourism industry, revenue from tourism is also increasing. Average daily expenditures per tourist rose 45 percent in the past six years. Distribution of tourist consumption expenditures in 1992 was 30.37 percent for accommodations, 18.34 percent for food and beverage, 16.06 for souvenir and shopping, 13.77 for local transportation, 8.86 percent for sightseeing, 7.41 percent for entertainment, and 5.19 percent other. Tourist expenditures on food and beverage were $365.69 million in 1990, and $601.22 million in 1992.

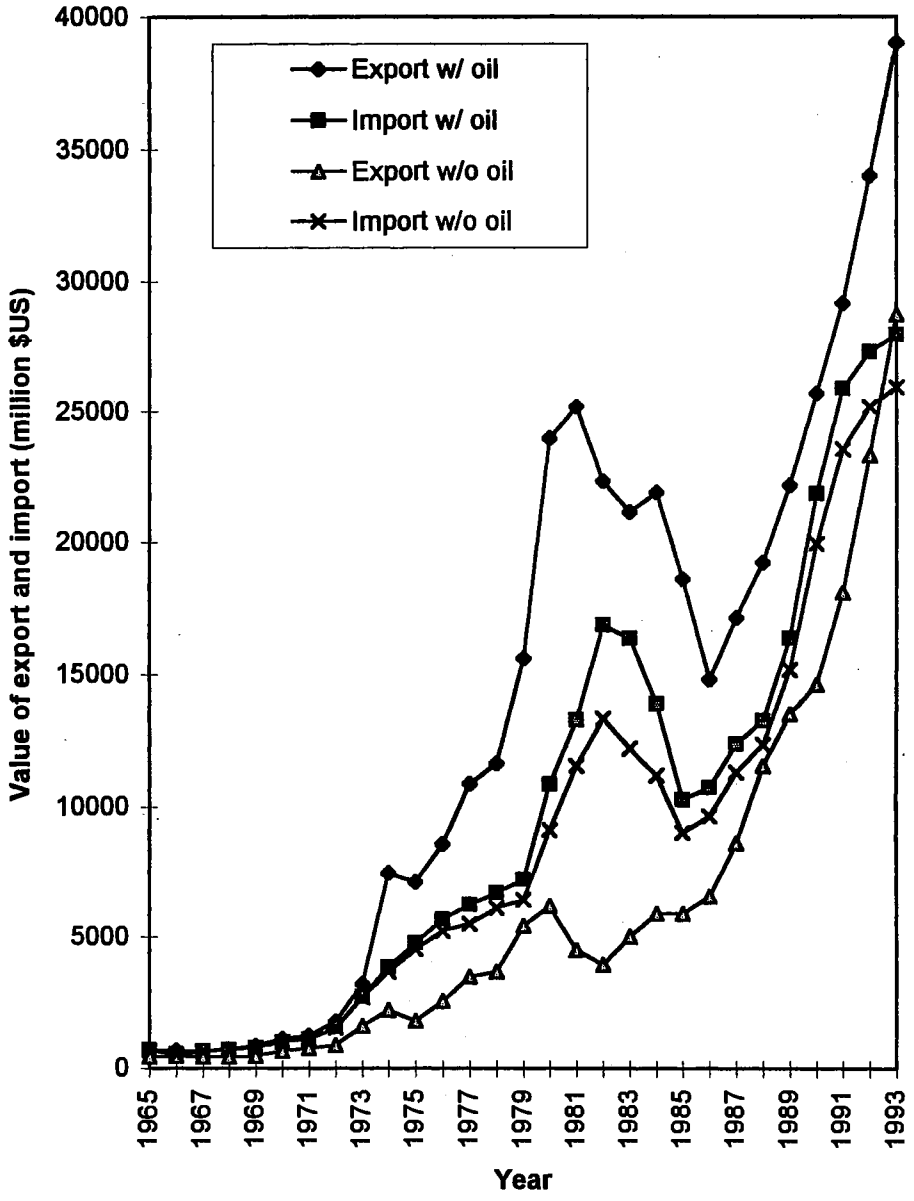

Figure 2.1. Indonesian exports and imports, 1965-1993.

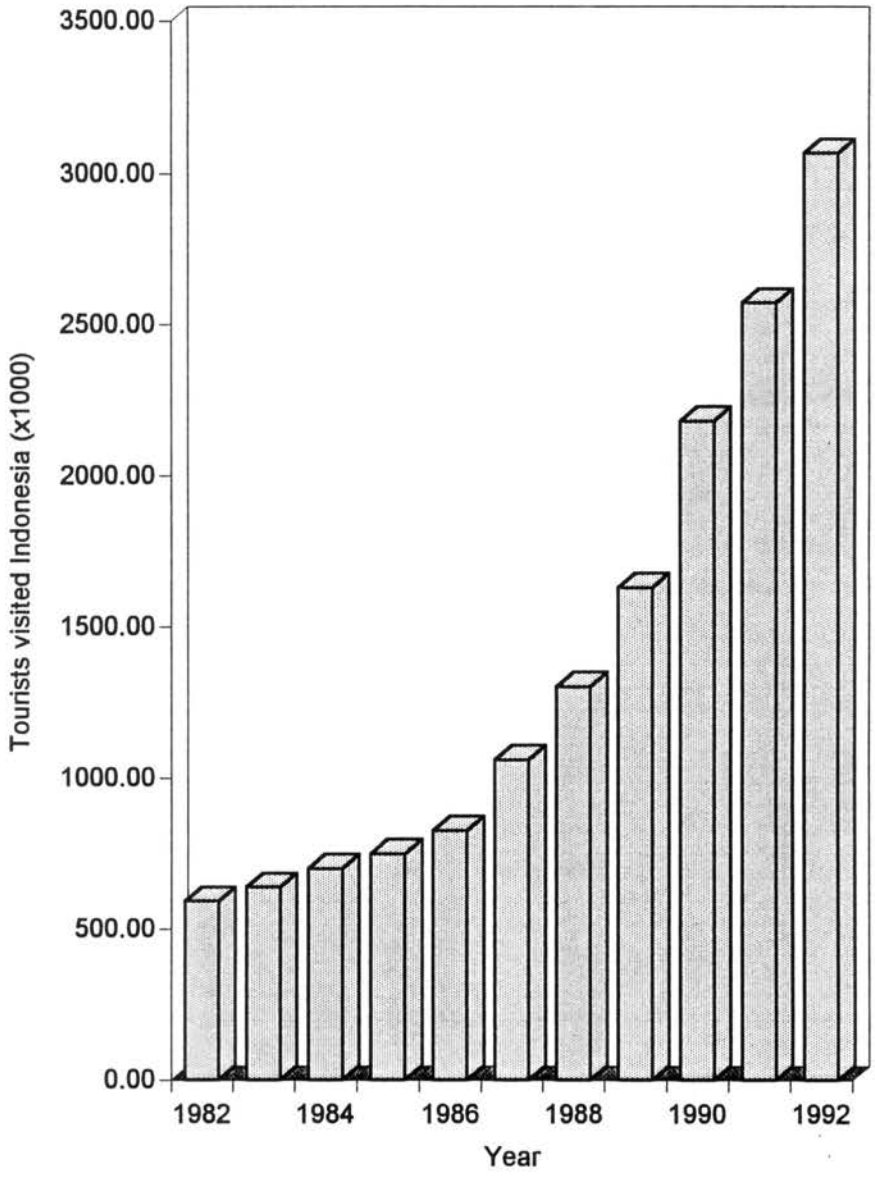

Figure 2.2. Total number of tourist visits by year (1982-1992)

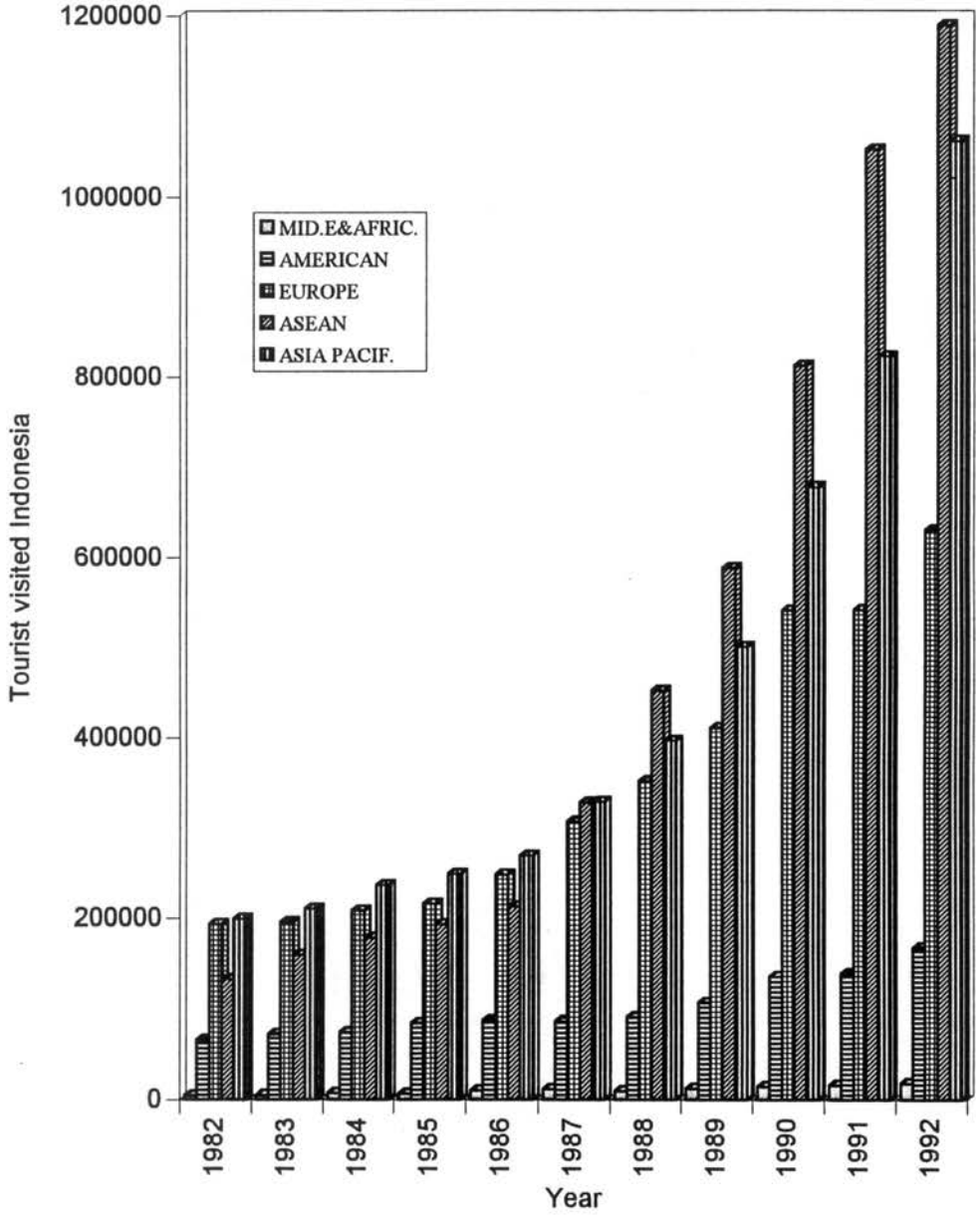

Figure 2.3. Number of tourist visits to Indonesia by region of origin.

3. GOVERNMENT REGULATIONS and ECONOMIC POLICIES

The need for business leaders to understand and have effective linkages with government officials has already been discussed. Several specific government regulations and economic policies are significantly more important when considering HVFP market entry in Indonesia. They are:

a. trade restrictions and implementation of international agreements;

b. economic policies with respect to balance of payments, and exchange rates; and

c. foreign investment, opportunities and restrictions.

Trade Restrictions and Implementation of International Agreements

When the oil price collapsed in the mid-1980s, the Indonesian government realized that such heavy dependence on oil export revenues would potentially be a problem. While export oriented diversification was promoted, many sectors of the economy were deregulated. Of particular importance was the deregulation of the financial sector that occurred in 1983 and 1988. In addition, rules permitting foreign and domestic investment and ownership of businesses were relaxed in June 1994. For food products, import licensing restrictions have been relaxed in a series of deregulation package since 1986. Domestic protection policies have been changed to tariff protection. For example fruit imports were deregulated in 1991 when state trading was abandon in lieu of tariff protection. Other reforms eased the export requirement, revitalized capital markets and the banking system, and reformed the domestic shipping regime.

The last three major reform packages were released in June 1991, July 1992, and June 1994. In June 1991 and July 1992, the government reduced duties on hundreds of categories of imports, eased or eliminated trade barriers on a number of other goods, including various iron and steel products and some classes of used machinery and capital plant. In June 1994, deregulation in the investment sector allowed foreign investors to own up to 90 percent of businesses in some sectors such as ports, production/transmission/networks and distribution of public electric, telecommunications, shipping and airplane industries, drinking water, atomic electricity generation, and mass media. In the past, foreign investors were allowed to own only up to 45 percent of these businesses.

In the future, Indonesia will likely liberalize trade further. Multilateral agreements, the General Agreement on Tariff and Trade (GATT), ASEAN Free Trade Agreement (AFTA) and Asia Pacific Economic Cooperation (APEC), suggest more opening of the economy. President Suharto has made a commitment to lower trade barriers and is likely to continue support for opening Indonesia's domestic market to the global market. Although various trade deregulation and privatization are announced almost every year sector by sector, commodity by commodity and product by product, protection in some sectors is still maintained (McBeth, 1995).

Economic Policies with Respect to Balance of Payments, Exchange Rates

Rapid growth and deregulation have opened up enormous opportunities, but also generated numerous problems. The government is now trying to deal with some of these problems in order to improve development prospects in the 1990s. Debt is one area where Indonesia remains vulnerable. The increase in current account deficit in 1991 was

about $4 billion dollars due to the increase in imports but it has been reduced in the following years to around $3 billion in 1992 and around $2 billion in 1993 (International Monetary Fund, 1995). Figure 2.1 shows exports and imports of Indonesia with and without oil. The government's tight monetary policies are partly aimed at dampening surging imports related to foreign investment projects. The government has backed up its tight money policies with austerity measures aimed at stemming the inflow of offshore loans. The government has also kept interest rates high to dampen an overheated economy. Trade balances improved in 1992 and 1993. In 1993, exports from Indonesia without oil increased more than imports excluding oil.

Indonesia maintains a liberal foreign exchange system. Capital transactions, including remittances of capital, profits, dividends and interest, are free of exchange controls. Foreign exchange regulations allow only authorized banks to deal in foreign exchange and execute foreign exchange transactions related to the import and export of goods.

Bank Indonesia, the Central Bank, has the responsibility for maintaining the stability of the rupiah. The rupiah is closely linked to U.S. dollar and officially tied to a basket of currencies. Foreign exchange operations are carried out through open-market transactions, in which Bank Indonesia offers and supplies foreign exchange at the exchange rates bid for and offered against the dollar and other currencies.

Indonesia has no foreign exchange controls and investors may freely transfer funds to or from abroad. Repatriation of profits, costs related to expatriate employment, expenses (loan principal and interest, royalty, technical fees, etc) and capital is permitted.

Foreign Investment: Opportunities, Restrictions and Changes in Restrictions

Indonesia's reform program has brought improvement to every dimension of the nation's economy. Economic improvement has contributed to political stability. Reform has helped the government of Indonesia maintain its economic expansion. Foreign investment commitments have grown an average of 74 percent annually since 1986 (NDIO, 1992). In addition to the reforms, other factors drawing foreign investment to Indonesia include a large labor pool, the wealth of Indonesia's natural resources and a diversifying manufacturing sector.

The Foreign Investment Law of 1967 has been modified and refined in subsequent years. This law established a sound framework for foreign investment by striking a harmonious balance between the business needs of investors and Indonesia's social and economic development priorities. The law established the Investment Coordinating Board (BKPM) that is the only government agent that is responsible both for determining appropriate investment policy and regulations as well as for supervising direct investor relations.

Some deregulation in investment has been introduced since 1985 to increase investment by streamlining procedures, reducing requirements and opening more sectors of the economy to private investment. For example, in 1989, BKPM scrapped a cumbersome list of areas open to foreign investment, and replaced it with the Investment Negative List (DNI). The 16 areas that were completely closed to foreign investment are simply itemized and 44 areas were conditionally permitted for foreign investment.

The most recent deregulation package was in June 1994. A regulation that required foreign investors to transfer majority control of their business within 20 years

to the local partner was removed. Moreover, full foreign ownership of many companies will be allowed for up to 15 years. Indonesia made the investment climate attractive in order to compete with other emerging countries. Figure 3.1 shows approved foreign investment projects and actual investment.

Investment reached new heights during the fifth development plan (1989-1994). The pace of development is quickening and government has stated that the amount of investment must double during the 1994-1999 development period, with foreign investment expected to make up an even greater proportion of the total than in the past. The majority of these funds will be directed at infrastructure improvements and manufacturing growth. They are seen as necessary to allow Indonesia to stay ahead of the growing demand for jobs. Only half of the targeted investment will come from the private sector, but investment has to stay at least as high as during the prior period. Because investment has fallen from the peak in 1990, achieving this goal may be difficult, especially with the emergence of a number of significant competitor nations for funds (Citibank, 1994).

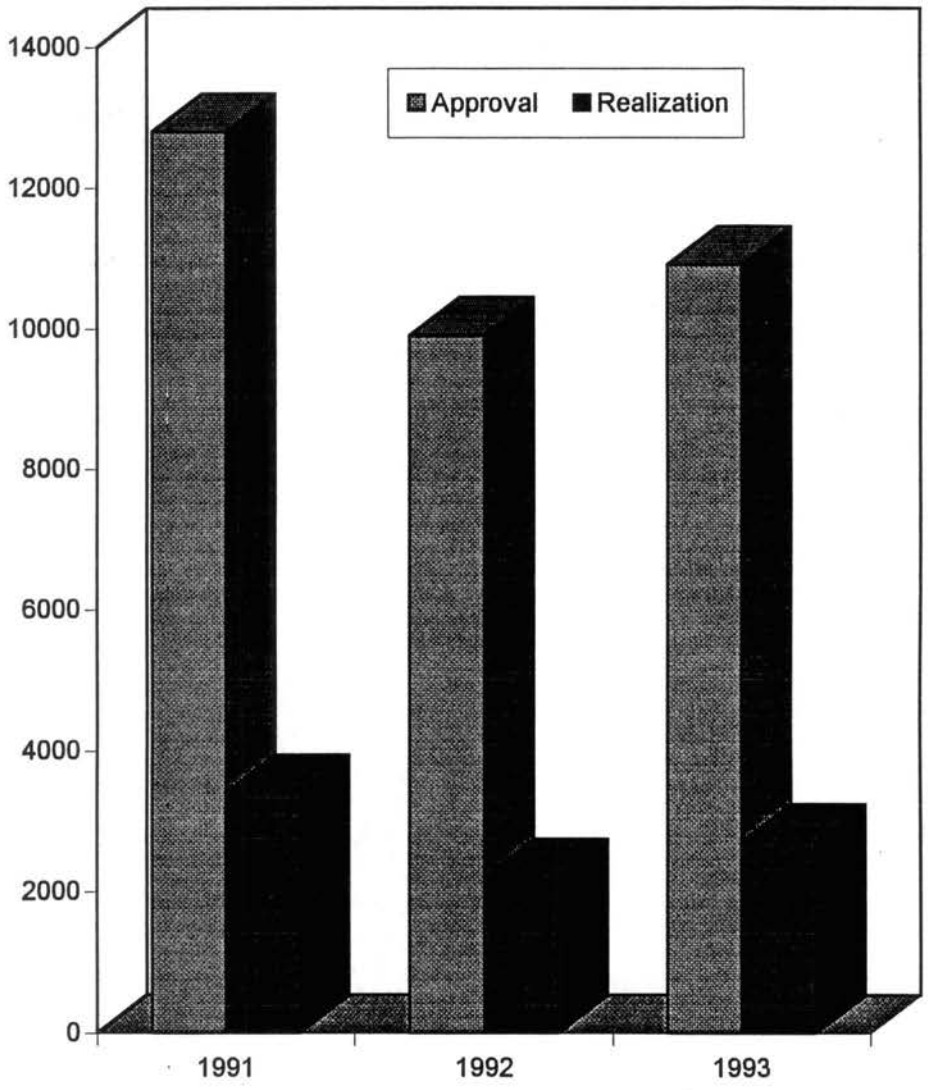

Figure 3.1. Foreign investment approvals and actual foreign investment (US$million)

4. MARKET AUDIT AND COMPETITIVE MARKET ANALYSIS FOR FRUIT

Market Overview

Prior to 1981, the U.S was a very active fruit exporter and had a large share in the Indonesian fruit markets (Figure 4.1, 4.2, and 4.3). In 1981, fruit importing was restricted to two state trading companies. The two state trading companies imported from only four to six countries who exported fruits to Indonesia. The purpose of the 1981 trade restriction was to protect domestic producers, but as shown in Figure 4.4, domestic fruit producers did not respond and production did not increase. Imports decreased sharply after the 1981 import restrictions, and stayed stagnant for a few years, and increased dramatically after the 1991 fruit deregulation package was implemented.

In total there are 17 licensed fruit importers, but only 6-7 are very active. All fruit importers' offices are in Jakarta. As part of our market audit, six of the seven active importers were interviewed in 1993 and one U.S. fruit representative was interviewed in 1994. The only active importer not interviewed has an exclusive contract with the New Zealand Apple Board. The questionnaire addressed the market advantages, market disadvantages, marketing practices, competing suppliers, and business requirements of U.S. fruit suppliers in the Indonesian market. Fruit importers are considered as the key decision makers in the fruit market (Figure 4.5).

The 1991 trade deregulation allowed a general list of importers to import almost all fresh fruits. In addition, tariffs were reduced to 20 and 30 percent (Table 4.1). Fruit imports increased after deregulation and the price decreased and the quality improved. In 1989 non-tropical fruit imports were $1.2 million in value for 2,464 metric tons while in 1992 the estimates were $34.7 million for 42,201 metric tons (Borris, 1994). The

most important fruits traded that were imported to Indonesia in 1993 are oranges, apples, and grapes which collectively account for 77 percent of the value of all non-tropical fruit imports (U.S. Embassy Jakarta, 1993).

The most important foreign competitors for the U.S. fruit are Australia (pears, apples and grapes), New Zealand (apples, kiwi), Chile (apples and grapes), China (oranges, pears) and Canada (apples). For deciduous fruits, domestic competition is much less important than foreign competition. This lack of domestic competition is due primarily to advantages in climatic differences, lack of economies of scale, poor technology, lower quality, and higher prices.

Competing Suppliers

Six fruit importers reported (Table 4.2) that 31 percent of the dollar value of their business was apples, 30 percent oranges, 19 percent grapes, and 12 percent pears with a variety of other products (strawberries and plums were specifically mentioned). This break down compares favorably with FAS reports (Borris) except for the percentages of apples and oranges. This difference perhaps reflects the omission of the one sole agent for New Zealand apples (Borris, p. 6) that was not interviewed and included in the survey results. None of the respondents reported New Zealand as an important secondary supplier perhaps because of the exclusive agreement that the New Zealand Apple Board has with one importer (Borris). Without exception, demand has been for the highest quality (i.e. Washington extra fancy apples). However, smaller sizes are desirable for apples, hovering in the 113-125 fruit per box range (U.S. Embassy, 1993). Moreover, one importer said that the 180 fruit per box range is the most preferred. Key competing suppliers for apples reported by the six fruit importers are Australia and

Chile. Competing suppliers for pears are Australia and China with Korea, Japan and Taiwan also supplying some of the market. For grapes, Australia and Chile are the alternative suppliers. For oranges, key competition is from Australia and China.

Ratings of the sources of advantage U.S. fruit products have over competing suppliers are shown in Table 4.3. Factors heavily favoring U.S. suppliers were customer acceptance, timely delivery, packaging, brand name, and labelling. Price received the lowest mean rating. However, the price of U.S. fruit is considered reasonable for upper and middle class consumers. The current tariffs are also reasonable even though some importers expect tariffs to be lowered. However, reducing tariffs further may cause political pressure from domestic fruit producers. Packaging and labeling are considered advantages for U.S. suppliers. Labels on U.S. fruits make it easier for customers to recognize U.S. brands. Some importers complain that suppliers from other countries mimic U.S. labels. Four of the six suppliers made unsolicited comments regarding customer preference for U.S. fruits. U.S. suppliers were rated favorably with respect to shelf-life and freshness even though U.S. fruits are shipped a longer distance (21-23 days from California and 25-26 days from Seattle) than New Zealand or Australian fruit (12 days from Australia). Overall, Indonesian fruit importers gave U.S. suppliers quite high marks. Experience with suppliers got mean rating near the middle; however, the standard deviation is the largest. This large standard deviation shows the diversity in the amount of experience the importers have had. Several had been on organized trips to the U.S. to visit fruit producers and exporters. These personal relationships appeared to be important.

Field notes of unsolicited comments made during the interviews provided further understanding of the markets. Importers frequently cited the lower transportation costs

from their closer neighbors. However, for grapes and pears which are less-storable than apples and oranges, direct competition is not as great because of seasonal availability. Comments regarding payment terms were also noted. Most Indonesian importers do not use letters of credit, they use telegraphic bank transfers. However, some U.S. suppliers demand letters of credit for payment.

Some higher volume buyers expressed great interest in having identifiable fruit on the shelf. Fruit needs to be identified using stickers and stamps which need to be protected from infringement by competing firms. Assertions were made that an Australian firm was copying a sticker from a U.S. company which made it more difficult to sell the U.S. product. Buyers want to be assured of the identity of the fruit that they import and are very knowledgeable of U.S. company names. Because of the higher price, the importers clearly understand the importance of maintaining a unique and protected identity of U.S. brands at the consumer level.

Australian firms were cited as visiting more frequently and being much more aggressive in the business tactics. In some business circles, there are considerable negative feelings toward Australia.

When asked about factors limiting future market growth, some of the responses are consistent with other responses while others are contradictory (Table 4.4). Income and consumers' consumption habits were given rankings of 5.0 or higher as factors restricting market growth. However, it is predicted by the World Bank that average per capita income will increase to $1,000 in the year 2000. Price and consumer advertising costs received average ratings of close to 5.0. Moreover, because of the perceived high quality of U.S. products, it is likely that buyers would be suspicious of inexpensive U.S. fruit. Availability of temperature controlled storage and transportation, handling

methods, the road/rail system, consumer acceptance, brand recognition, domestic product development, and government regulations were considered as factors that are moderately limiting the future market growth. Temperature controlled transportation and temperature controlled storage are still very rare in big cities in Indonesia.

To develop business with Indonesian fruit importers, introductions from people you know were deemed the best way of gaining access followed by personal visits to the buyers offices. It is interesting to note that trade meetings, business consultants, and introductions by government agencies were deemed to be particularly ineffective. These results are consistent with recommendations made by Saeed and Goddin (p. 36) who stated that Indonesians do business with 'friends', with people they know, so developing a rapport and friendship is crucial.

Most of the fruit importers are relatively small firms in terms of number of employees and dollar value of business. Most have very modest offices that do not attract attention to themselves or their businesses. Two of the companies interviewed in 1993 had offices in their homes as well as at a business location.

The importers report that they sell primarily to wholesalers and distributors (88 percent) with some reporting sales to large retail stores and small retail grocery stores.

Two importers are using a variety of long-term contracts with suppliers and three reported that they sometimes receive short-term credit from suppliers. In dealing with disputes, the importers generally negotiate with suppliers and the most frequent type of negotiation is for a price reduction if there is some disagreement. The companies are using FAX and telephone for communication systems with only one reporting use of telex and cable. Letters of credit and telegraphic transfers were the predominant means of making payments. The companies are generally not protected against currency

fluctuations which is not surprising given the relative stability of the Indonesian Rupiah. Almost all product is arriving by ship with only one company reporting any air freight receipts.

Distribution Channel

Approximately 30 percent of the fruit coming to Indonesia is being transhipped through Hong Kong and Singapore and the rest is being imported directly from supplying countries (U.S. Embassy, 1993). Jakarta is the only port of entry for fruit imports. Cold storage facilities in Jakarta can accommodate 50-60 containers. Distribution out of Jakarta and Java is by non-refrigerated truck and junk (boat). Currently, cold storage facilities are being built in Surabaya on the Eastern end of Java which is one point of the distribution channel outside of Java. This facility expands the opportunities of market expansion to Bali and the surrounding vicinity.

Some of the fruit importers act as wholesalers and some also own retail outlets. They also sell directly to supermarkets or into wholesale channels. Figure 4.5 shows the food distribution system for fruits in Indonesia. Wet markets, fruit stalls, push carts, and vendors are very important distribution channels that sell fruit on every street corner not only in Jakarta but also in other big cities (Bandung, Semarang, Surabaya, etc.), and make it available throughout the day and night.

Strategy Ideas

The results indicate that U.S. suppliers have used a variety of strategies, many of which have been successful. Strategies to develop personal relationships with importers are important. The importers like to know who is at the other end of the FAX machine

and how they will respond to their problems. Many Indonesians visit the U.S. on a fairly regular basis. U.S. exporters need to be prepared to entertain Indonesian business customers and encourage visits to their firm. Trade prospecting visits to Indonesia appear to be useful and most of the Indonesian fruit importers have good relationships with the U.S. Embassy personnel. Some large firms and producer groups are employing trade representatives in Indonesia. The success of these ventures will depend on their ability to successfully develop personal relationships. Many other firms and commodity organizations are servicing the Indonesian market from offices in Singapore. The ability to be successful with this strategy will depend on the degree of commitment to the Indonesian market and the personal relationships and responses that the Indonesian buyers receive to their needs.

U.S. suppliers should continue to expect buyers to complain about prices yet at the same time the current market is for only the best quality U.S. products. Several fruit buyers indicated that less than top quality products is not marketable in the Indonesian market.

U.S. firms will need to learn how to do business without necessarily drawing extraordinary attention to their companies. Developing political connections with key officials in government agencies remains an important strategy.

Brand identification appears to be critical in all retailing in Indonesia. For fruit this means that distinctive stickers for each piece of fruit are appreciated and must be protected from infringement by competing suppliers.

Future Concerns about the Market

It has been suggested that deregulation in the past has reduced Indonesian economic problems due to oil price reduction in the early 1980. Indonesia experienced 6.5 percent average growth per year from 1986 to 1991, while in the last five years it experienced only 3.5 percent average growth per year. However, government activity in trade deregulation has been decreasing since 1991.

High protection causes Indonesian companies to be less efficient than their foreign competitors. In the long-run, protection will reduce the incentive to compete internationally since those companies are only able to sell their products in protected domestic markets. Non tariff protection such as import bans, import monopolies, import quotas are still applied to more than 300 goods. Bulog, the government's Agency of Logistics, monopolizes imports of basic agricultural foodstuffs such as rice, soybeans, wheat and sugar. The result of such policy is that the price of those commodities are higher than the import price. For example, the price of sugar in the domestic market is 40 to 50 percent higher than the world price (Winarno, 1995).

A further concern is the presidential election in 1998. A national election champaign will be started in 1997. There is sign that Suharto would like to reduce military participation in government.

All U.S. food suppliers should continue to expect strong competition from Australia, New Zealand, and China. Warehouse space and cold storage problems will continue to be problems in the short run. In addition, mechanized handling is not readily available and labor intensive handling is encouraged in order to create more jobs. As

a result, many cold storage warehouses that are currently being used are not designed for pallets and each box must be handled individually.

Conclusions

Indonesia appears to be at a stage of development where rapid growth in some high-value food products will continue to occur in the next five to ten year time horizon. Sources of continued market growth include: 1) income growth creating a larger upper and upper middle class; 2) further trade deregulation and potential reductions in tariffs; 3) increasing development of retail grocery chains; and 4) growth in the tourism industry. Realization of the market growth potential depends heavily on continued political stability with a free trade philosophy. Currently, the government is interested in continued development of trade flows and has expressed concerns about declining exports in the textile sector. In addition, some initial concerns about outward capital flows have been expressed.

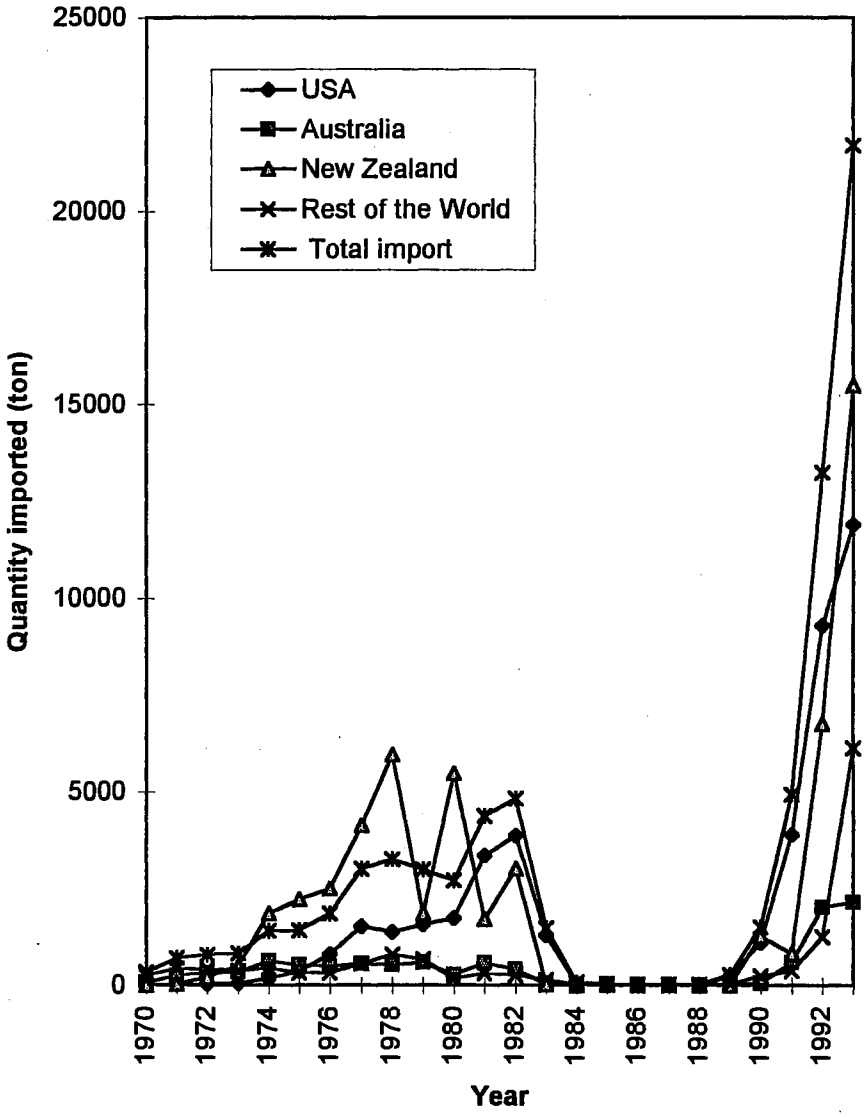

Figure 4.1. Fresh apple imports in Indonesia by country of origin, 1970-1993.

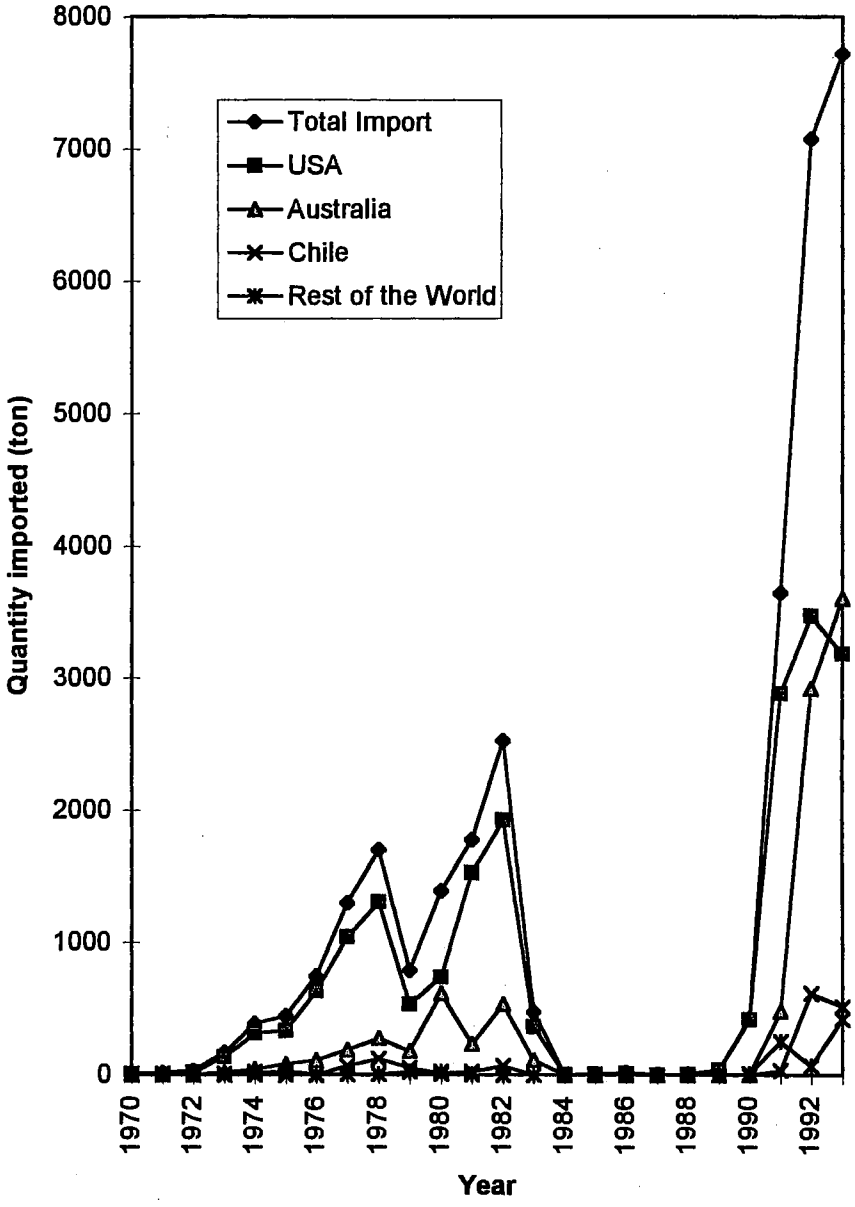

Figure 4.2. Fresh grape imports in Indonesia by country of origin, 1970-1993.

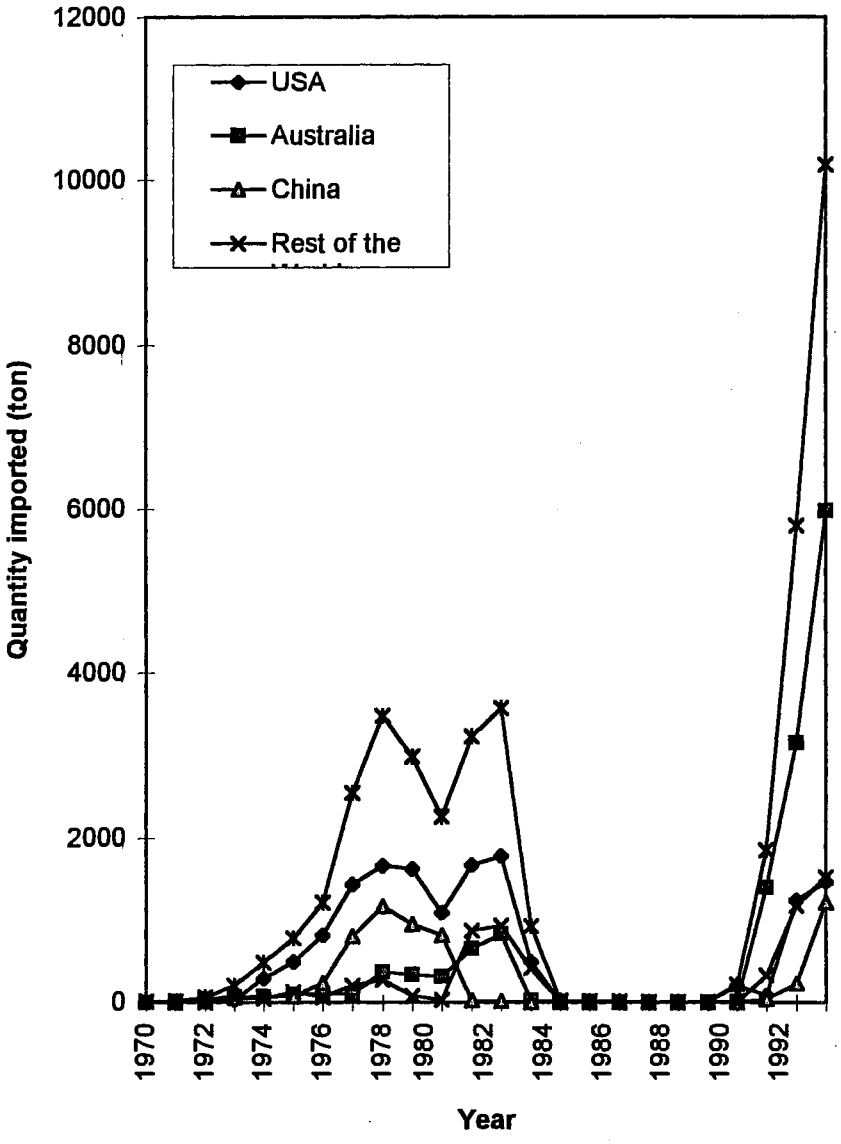

Figure 4.3. Fresh orange imports to Indonesia by country of origin, 1970-1993.

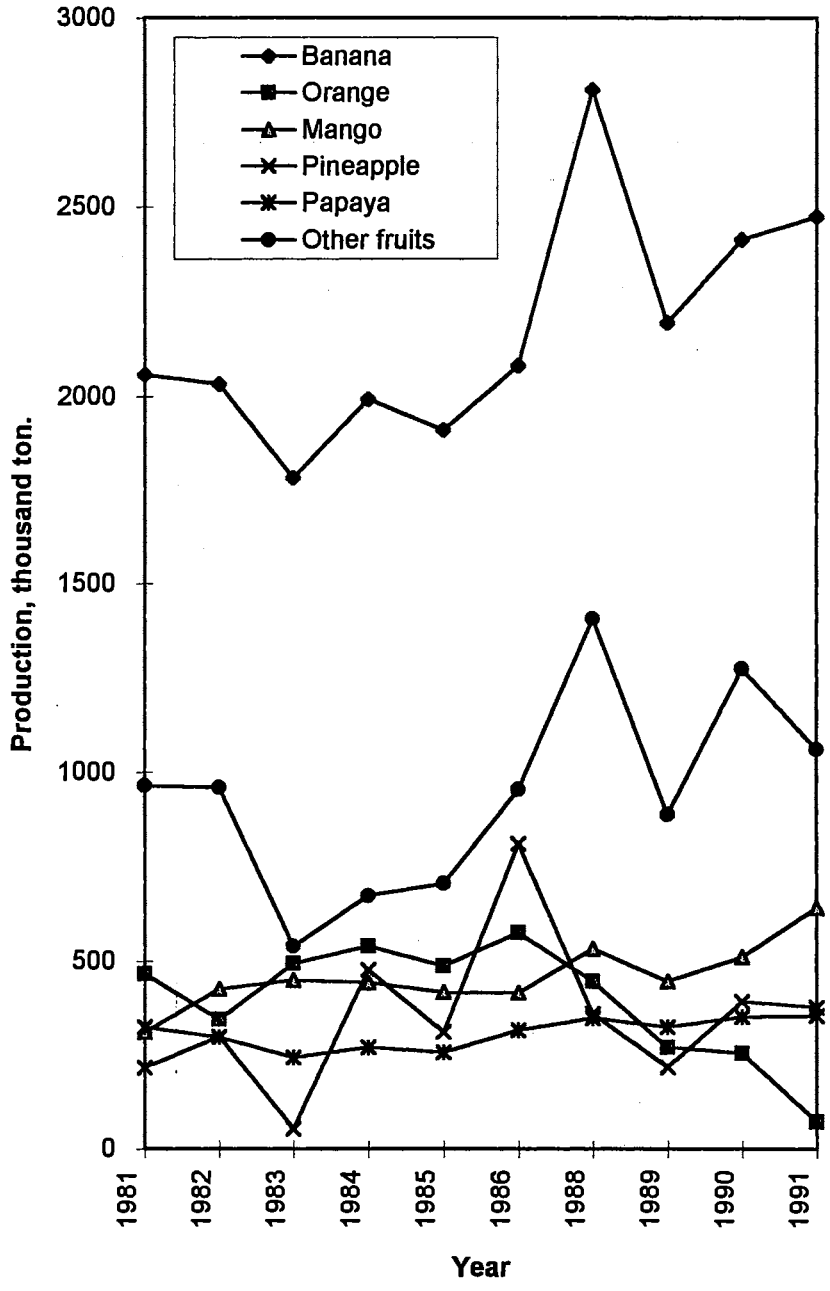

Figure 4.4. Indonesian domestic fruit production, 1981-1991.

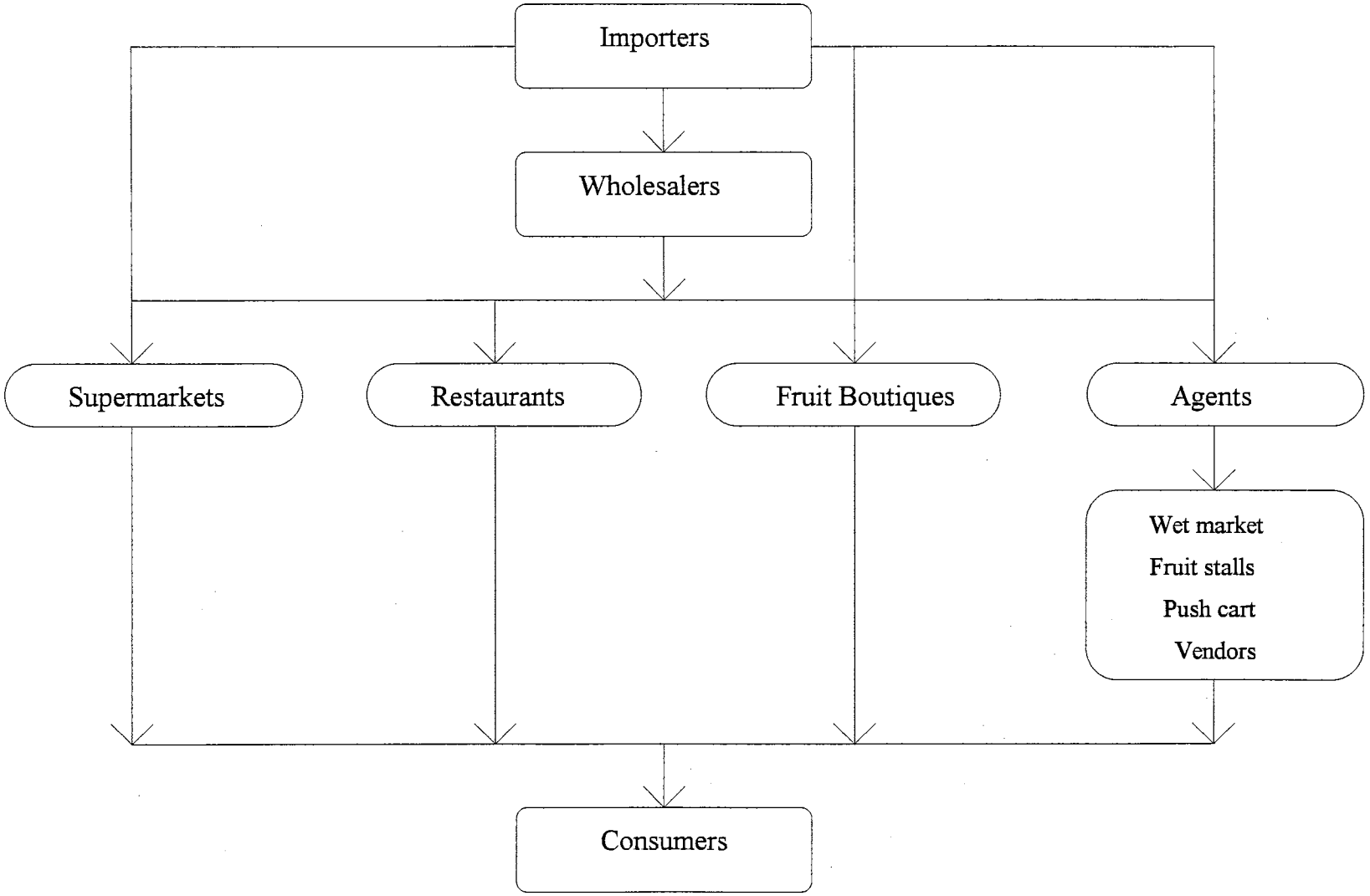

Figure 4.5. Fruit distribution channels in Indonesia

Table 4.1 Import taxes on fresh fruits in Indonesia, 1994.

Type of fruits	Tax/tariff (%)
Fresh Oranges	30
Fresh Mandarin	30
Fresh Citrus Lemon	20
Fresh Grapefruit	20
Fresh Grape	30
Fresh Apple	30
Fresh Pear	20
Fresh Apricot, Cherry, Plum, Strawberry	20

Sources: Ministry Trade of Indonesia, 1994.

Table 4.2 Non-tropical fruit imports, Indonesia.

Product	FAS volume 1992 (US$1000) (Borris)	Percent of total volume (Borris)	Average percent of business reported by six fruit importers
Apples	13,231	38	31
Oranges	5,800	17	30
Pears	4,474	13	12
Grapes	7,684	22	19
Other	3,563	10	8
Total	34,752	100	100

Table 4.3 Average ratings by six Indonesian fruit importers of factors in terms of advantages for U.S. suppliers, (1 meaning disadvantage for U.S. supplier, 6 meaning a great advantage for U.S. suppler).

Possible source of advantage	Mean Rating	Standard Deviation
Brand Name	6.00	0
Packaging	5.57	0.79
Make time deliveries	5.43	0.53
Customer acceptance	5.17	0.98
Labelling in Indonesian language	5.00	1.67
Advertising support	4.67	1.97
Freshness	4.40	1.81
Experience with supplier	4.29	2.06
Payment terms	3.86	1.46
Nutritional value	3.33	1.15
Government regulations	3.00	1.63
Price	2.29	1.38

Table 4.4 Average ratings by six Indonesian fruit importers of importance of factors that may limit future growth in fruit import volumes (1 meaning unimportant limiting factor, 6 meaning a very important limiting factor).

Factor that may limit growth of fruit imports	Mean rating	Standard deviation
Income of population	5.40	0.98
Consumer consumption habit	5.14	1.07
Consumer advertising costs	4.86	1.86
Price/cost too high	4.71	1.11
Consumer acceptance of foreign products	4.43	1.81
Brands are not recognized	4.43	1.81
Import taxes, fees	4.29	1.50
Lack of temperature controlled transportation	4.23	1.60
Food handling methods and food safety	3.86	1.77
Development of domestic production	3.86	1.86
Lack of temperature controlled storage	3.86	1.77
Difficult to develop brand recognition	3.86	0.90
Road/rail system	3.57	1.90
Government trade regulations	3.50	1.76
Lack of labelling in Indonesia	2.60	1.82
Unwillingness to adjust package sizes	2.33	1.37

5. TOURIST BUSINESS TRAVELERS, AND AWAY FROM HOME FOOD MARKET AUDIT

Tourism and business travel is a source of expanded economic activity. Increasing foreign exchange earnings, providing employment, and enhancing standard of living are partially attributed to travel related industries. Realizing the potential, the government of Indonesia encourages private investments in all forms of tourism and business travel facilities such as airports, transportation, communications, hotel and resort construction, recreational facilities, tourism employee training, historic preservation and restoration. Foreign investor participation in joint-ventures is encouraged. Since 1988, tourism has been Indonesia's fourth largest source of foreign exchange and ranked third in 1992 after the non-oil and energy sectors. The revenue from tourism reached $3.3 billion in 1992, and $4.7 billion in 1994. Since 1984, Indonesia's tourism related foreign exchange earnings have risen more than fourfold. In 1992, a major "Visit Indonesia" promotion was conducted. Major promotion events and cultural performances were used to welcome visitors and attract more tourists to Indonesia.

Survey Market Result

Data on the hotel and restaurant market were collected in 1993 and in 1994. In 1993, three hotels were interviewed directly to pretest the survey. In 1994, mail surveys were used to obtain larger geographic coverage. Besides hotels in Jakarta, 29 other hotels in other big cities; such as Yogyakarta (3 hotels), Semarang, Surabaya (2 hotels), Bali (21 hotels); Kuta, Denpasar, Nusa Dua, and Lombok; Mataram were included. The questionnaires that were sent to the hotels were provided with a return envelope and

stamp. Ten hotels in Jakarta, Bandung, Surabaya, Nusa Dua, Denpasar, and Mataram and one restaurant responded in 1994.

Table 5.1 shows the average percentage of category product imported from total product imported by hotels and restaurants. For fresh and frozen meat, 25 percent of the product used in hotels is imported. For beverages 23 percent is imported. For groceries 14 percent is imported. For frozen food, 13 percent is imported and for dairy products 10 percent is imported. For fresh fruits and fresh vegetables 8 and 6 percent are imported. Fresh vegetables used in hotels are mostly domestically produced. Only vegetables that are not grown or expensive to grow in Indonesia are imported. Since fresh fruit imports are served in hotels together with domestic fruit, fresh fruit imports only contributes a small percentage. Local products are used for large parties. The United States is one of the sources of all the product categories except for dairy products. Moreover, different companies supply different product categories.

Purchasing decisions in hotels and restaurants are made mainly by the head chef (50 percent), by a committee (44 percent), and by other individuals (6 percent). The average number of customers per week is 1,800 for lunch, 566 for breakfast, and 1288 for dinner.

Ratings of the advantages of U.S. products over competing suppliers are shown in Table 5.2. None of the factors seems to be a significant advantage or disadvantage for U.S. suppliers. Packaging receives the highest rating, followed by freshness, nutrient standards, and experience with suppliers. Timely delivery is rated the lowest. However, hotels do not do the importation by themselves. Hotels buy products from wholesalers, retailers, and/or grocery stores. Delivery delays from the wholesaler or retailer can sometimes be handled by changing suppliers.

Ratings of factors that limit future market growth are shown in Table 5.3. Consumer income and prices were given rankings of 5.0 or higher as factors restricting market growth. Tourism development, ability to meet Hallal (Islamic)standards, food handling/safety, and import taxes were given average ratings of 4.92 indicating concern about how these factors are limiting growth. Consumer habits and acceptance of new products were given the lowest rating of the factors limiting growth potential.

Business development strategies were also evaluated. Private visits are the best way to develop a new business with hotels and restaurants, followed by trade shows. Introductions from people you know, mail brochures, trade meetings, introduction by government officials, and using business consultants were rated as relatively ineffective methods of developing new business.

Answers about the percentage of the products based on supplying countries indicate that 50.33 percent of the products used are domestically produced (Table 5.4). Australia and U.S. have 16.11 and 10.56 percent of the imports, respectively. Moreover, five respondents responded to the question of the percentage of types of customers that eat at hotels. Local families (including weddings or parties) represent 36.4 percent, tourists represent 22.4 percent, foreign businessmen represent 18.6 percent, local businessmen represent 18.4 percent, and government officials represent 5 percent. All of the market segments depend on economic growth and tourist development for growth.

Of the hotels and restaurant, 28.6 percent are organized as joint ventures. There are many types of arrangements used by hotels and restaurants in doing business. Three hotels and restaurants reported using mixed arrangements in doing business. Two hotels and restaurants are using long-term contracts with suppliers and two are using letters of

agreement with the supplier. One is using reciprocal agreement and eight of them are using short-term credit where one of them mentioned 30 to 45 days credit.

Table 5.5 shows the outlet that usually serves hotels and restaurants and the percentage of products purchased. Wholesalers or distributors are the main distribution channel for hotels and restaurants. Some deal directly with importers.

There are many ways the disputes with the suppliers are settled. Contracts, returning the products and exchange for the required product, price reductions, and negotiations are the common practices used. Hotels and restaurants are using fax and telephone for communication system with four reporting use of telex, one reporting use of cable, and one reporting use of electronic mail. All of the hotels and restaurants use 30 days of credit as method of payment. Some of them combine it with using cash or bank draft delivery and one can get a discount deal for prompt payment.

Eleven of the fourteen responded to the question of the approximate dollar value paid for imported products. Two hotels spent more than two million dollars for imported products, two others spent between one to two million dollars and the rest spent less than one half million dollars. In general, perishable products are delivered most frequently. The frequency of delivery for each product category is shown in Table 5.6. For fresh and frozen meat, 38.5 percent have a delivery schedule of 2 to 3 times per month, 30.8 percent receive products one time per week, and 23.1 percent receive products more than once per week. Groceries are delivered more than once per week (45.5 percent), one time per week (27.3 percent), and 2 to 3 times per month (18.2 percent). Moreover, fresh fruit is delivered more than once per week (83.33 percent), and so are fresh vegetables (90.91 percent).

Fast Food Industry Development in Indonesia

A somewhat unique source of restaurant market potential is the fast-food industry. Kentucky Fried Chicken was the first fast food franchise in Indonesia and opened on October 18, 1979. The fast food business developed rapidly in the early 1980s. The first McDonalds was opened in 1991. At present, there are 64 international fast food franchise companies operating in Indonesia (CIC Consulting Group, 1993). In addition to those, there are domestic fast food restaurants (CIC Consulting Group, 1993).

The development of a fast food industry in Indonesia was the result of increasing income, especially in urban areas. Other reasons are a change in life style among middle and higher income groups. In particular, the participation rate of women in the work force has increased and the population has more access to automobiles. In addition, the U.S. fast food concept is similar to some of Indonesia's traditional food and restaurants. Fast food restaurants have become favorite public places for young people and students to meet.

The menu served by fast food companies is dominated by fried chicken. Fried chicken has long been a staple of the Indonesian diet. Six foreign fast food restaurants serve fried chicken with 65.6 percent of seat capacity of the total capacity of foreign fast food restaurants in Indonesia. Nine serve burgers with 19.4 percent of seat capacity. Five provide pizza and Japanese food with seat capacity 8.6 percent and 6.5 percent. Most U.S. companies have modified their menus to include rice as an entre with the chicken. Portion sizes have been reduced in some cases to include a one-piece meal option. In some cases, restaurants offer special spicy versions of their products to appeal to some Indonesian taste preferences (CIC Consulting Group, 1993).

Table 5.7 indicates the number of international and local fast food and sales value in five big cities and other cities in Indonesia. Jakarta and its surrounding areas constitute 67 percent of the sales value from total sales from 5 big cities in Indonesia. Semarang gets the lowest percentage of sales value. Foreign fast food gets the average percentage sales value of 67.45 percent, while local fast food gets 32.55 percent. Tables 5.8 and 5.9 show the profile of the main fast food companies in Indonesia during 1980s and 1990s. During the last six years, from 1987 to 1993, the number of foreign fast food companies increases by 32 percent per year. Foreign outlets appear still to be dominant in big cities (CIC Consulting Group, 1993).

Expatriates working as technical advisors in the franchise business in Indonesia are part of the agreement between franchisee and franchisor. They are really needed, especially in the stage of preparation and the beginning of business operation.

Basic materials used in some fast food restaurants are still supplied by importing. For fried chicken, the broilers and seasoning are frequently obtained from local suppliers. But the original fast food concept, recipe and spices, such as those in KFC, are imported from the U.S. Frozen potatoes and frozen processed chicken nuggets or patties are frequently imported from the United States, Singapore and Malaysia. For McDonalds, sausage and some parts of the meat requirements are met by imports (CIC Consulting Group, 1993). KFC restaurants need 200 to 500 chickens and 80 to 100 kg of potatoes each day (CIC Consulting Group, 1993). For every 500 chickens, 19.5 liters of frying oil are needed, not to mention oil needed for frying potatoes and other foods. These needs vary with each fast food restaurant. In the long run, if more raw materials can be provided domestically, the development of the foreign fast food industry will influence many sectors in Indonesia economy.

Table 5.10 shows the distribution system and sales targets of foreign fast food companies in Indonesia. California Fried Chicken (CFC) franchises locate 50 percent of their outlets in shopping centers, 10 percent in office buildings, 10 percent in condominiums, 10 percent in supermarkets, 5 percent each in recreational centers and real estates, and 10 percent in other locations. Figure 5.1 shows development of foreign fast food network, while Figure 5.2 shows development of the local fast food network. The foreign fast food system is distinguished into master franchise and full franchise. Master franchiseowners are entitled to sub-franchised, and the right to develop the franchise with the permission of the main franchisor. Full franchise companies oversee completely the management of their overseas partner. In Indonesia, there is one company operating as master franchise and 13 companies operating as full franchises (CIC Consulting Group, 1993). Two local fast food companies are fully applying the franchise system while 53 other companies are operating without a franchise system (CIC Consulting Group, 1993).

Factors affecting prices in fast food restaurants are the price of raw materials, the image of franchise brand name, location, kind of food and service offered, profit margins, and the cost of the service and promotions. A franchisor with a popular brand name and strategic location will set higher prices on their products. Indonesian customers, especially middle income groups and young people, still consider price as an important factor when they dine in restaurants .

Market Opportunities

Tourism continuous to have great potential for expansion. New development is occurring in some of the more remote areas (McBeth). There are many potential

locations for tourism especially the east part of Indonesia such as Lombok, Sulawesi and Maluku. Moreover, the established locations such as Bali, Nusa Tenggara, and others are continuing to develop. Given the government support and the natural resource potential, it is very likely that tourism in Indonesia will continue rapid development and the number of tourists visiting will increase over the year.

The products that are potentially imported for hotels are fresh and frozen meat, beverages, groceries, frozen food, dairy product, fresh fruit, and fresh vegetable. People are aware of U.S. products. U.S. beef used for steak has been priced higher than Australian beef. However, people differentiate U.S. beef from Australian beef.

Development of the tourism industry should be supported by the increase in services including food services. If domestic production can not fill the need or there is no domestic close substitute for imports, the demand for high value food products will increase as tourism increases in Indonesia. Tourists accounted for 22 percent of hotel customers. Those percentages may increase as tourists visit to Indonesia increase. Moreover, Indonesian economic development and business opportunities offered in Indonesia are important factors influencing demand for high-value food products (HVFP) in hotels. The contribution of local and foreign businessmen as hotel customers that eat at hotels is 37 percent. Hotels are becoming a very convenient place to do business or to be a business meeting place. One of the reasons may be time saving especially in Jakarta where traveling in the city is time consuming.

Trade shows are the second most effective way to develop a new business with hotels. Even though hotels do not import directly, they do use U.S. products. Trade shows will increase awareness of U.S. products. Chefs are key decision makers at hotels and are extremely concerned about food quality.

In June 1993, the number of visitors to fast food restaurants in Indonesia was higher than anticipated. The number of potential visitors exceeded the target by 609,187 persons. New fast food investment opportunities in various cities are still needed, especially in suburban areas around the five largest cities or cities outside those five, which are estimated to have surpluses of 372,552 visitors. Table 5.11 shows the population, economic condition and per capita income in Jakarta, Surabaya, Bandung, Semarang, and Medan. In addition, it is necessary to diversify the menu of fast food for both local and foreign foods to meet the demand of visitors in various areas and nationalities. Table 5.12 shows the market prospect for fast food in the five largest cities. In Medan, Bandung, Semarang, Surabaya, and other cities, the number of seats provided by fast food is less than the number of potential visitors.

Conclusions

As one of the foreign exchange sources and given the abundant of the beautiful potential locations, tourism is a growing industry. Competition in this sector is based on the ability of hotels and restaurants to serve their customers. In doing so, they train their employees and do research cooperation with universities about food sanitation, safety and handling.

A chef is the most important decision maker at hotels regarding products used in hotels. Private visits to the chef to introduce new products is one way to develop new business with restaurants. Moreover, it is better for U.S. companies to conduct trade shows at least once in a year and invite chefs to the trade shows. Currently, most of the products used at hotels are domestically produced.

The fast food restaurant businesses, in which most of them are run under a franchise in the big cities in Indonesia, particularly Jakarta, Bandung, Surabaya, Medan, and Semarang, have been growing and developing very rapidly. Each fast food restaurant in Indonesia serves certain main dishes. Fried chicken is the dominating main menu item served by foreign and domestic fast food restaurants.

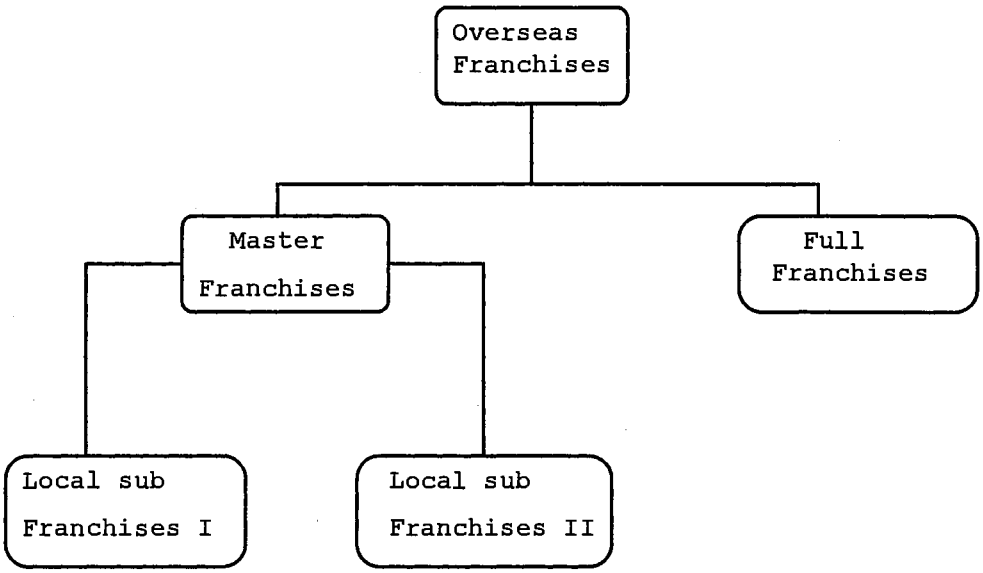

Figure 5.1. Foreign fast food distribution system in Indonesia

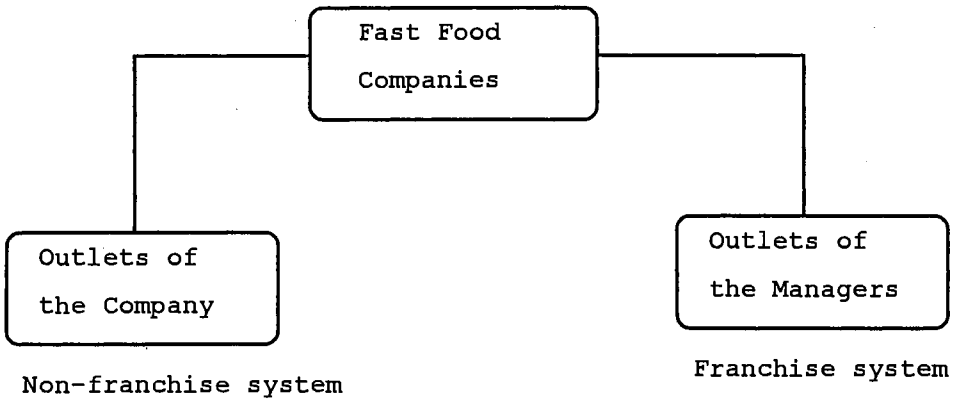

Figure 5.2. Local fast food distribution system in Indonesia

Table 5.1. Percentage of import value for products categories and their sources.

Products	Percentage	Sources
Fresh and frozen meat	25.16	USA, Australia, New Zealand
Beverages	22.99	USA, Australia, France, Germany, Canada, United Kingdom
Groceries	14.05	USA, Thailand, Singapore, Australia, Bangkok, Italy
Frozen Foods	13.45	USA, Australia, New Zealand, Canada, France, Netherlands
Dairy Products	9.61	Australia, Switzerland, France, Netherlands
Fresh fruits	8.23	USA, Australia, China, New Zealand
Fresh Vegetables	5.53	USA, Australia, New Zealand, Netherlands
Others	0.97	

Table 5.2 Average ratings by thirteen hotels and one restaurant of factors in terms of advantages for U.S. suppliers (1 meaning disadvantage for U.S. supplier, 6 meaning a great advantage for U.S. supplier).

Description	Mean rating	Standard deviation
Packaging	4.92	1.16
Freshness	4.70	1.15
Nutrient standard	4.69	0.63
Experience with suppliers	4.58	0.90
Customer acceptance	4.45	1.21
Brand name	4.33	0.89
Labelling in Indonesia	4.30	0.67
Government regulations	4.27	1.19
Expiration date	4.18	1.25
Easiness to prepare	4.17	1.19
Hallal standard	4.17	1.59
Price	4.00	1.48
Payment term	4.00	1.34
Advertising	3.91	0.94
Make time delivery	3.82	1.47

Table 5.3 Average ratings by thirteen hotels and one restaurant of the importance factors that may limit future growth in fruit import volumes (1 meaning unimportant limiting factor, 6 meaning a very important limiting factor).

Description	Mean rating	Standard deviation
Price/Cost too high	5.23	0.93
Tourism development	4.92	1.32
Hallal standard	4.92	0.67
Import tax/tariff	4.92	1.04
Government regulations	4.83	1.03
Consumer acceptance of new products	4.33	1.15
Domestic product development	4.31	0.95
Consumer consumption habit	4.00	1.63
Income of population	1.08	5.00

Table 5.4 Percentage of food product from supplying countries, hotels and restaurants in Indonesia.

Description	Percentage
Indonesia	50.33
Australia	16.11
USA	10.56
France	3.33
Other Europe	3.18
Other Asia	2.99
Japan	2.89
Netherlands	2.06
Malaysia	1.22
Germany	0.78
United Kingdom	0.61
Singapore	0.61
Other	3.50
Total	98.17

Table 5.5 Percentage of products/food purchased from types of suppliers in the distribution channels.

Description	Percentage
Wholesalers/distributors	55.77
Specialty retail shops	13.00
Large retail chain stores	10.38
Importers	7.50
Direct from food processor	7.00
Smaller retail grocery stores	4.23
Specialty restaurants/hotel suppliers	1.35
Other	0.58
Total	99.81

Table 5.6 Hotel and restaurant delivery schedule by product category.

Delivery schedule	Fresh & frozen food	Groceries	Fresh fruit	Fresh vegetables	Frozen food	Beverages	Dairy product
	.....percentage of respondents.....						
> once per week	23.08	45.45	83.33	90.91	27.27	23.08	76.92
1 time per week	30.77	27.27	0.08	-	36.36	30.77	15.38
2-3 times per month	38.46	28.28	0.08	0.09	27.27	38.46	0.08
1 time per month	0.08	0.09	-	-	0.09	0.08	-

Table 5.7 Fast food sales in Indonesia by area and origin, 1993.

Main selling areas for foreign fast food	Origin of fast food	Number of outlets[1]	Average (Rp.000)	Sales value[1]
Jakarta & vicinity	Foreign	146	80573	11763676
	Local	143	35622	5093965
Surabaya	Foreign	16	97678	1562852
	Local	15	19889	298341
Bandung	Foreign	14	46016	644220
	Local	27	37322	1007706
Semarang	Foreign	2	26933	53865
	Local	12	8303	99630
Medan	Foreign	8	67560	540480
	Local	2	6000	12000
Other Cities (more than 15 cities)	Foreign	33	68303	2253998
	Local	58	27776	1610982
Total all foreign fast food restaurants		219	76800	16819091
Total all local fast food restaurants		257	31588	8118124
Total all fast food restaurants		476	52389	24937215

Source: P.T. Corinthian Infopharma Corpora (CIC Consulting Group, 1'993).
[1]Data are for June 1993

Table 5.8 Profile of main fast food companies in Indonesia in 1980s.

Start of operation	Fast food brand name holding companies	Trade mark	Total 1993
1979	PT Fast Food Indonesia	Kentucky Fried Chicken	86
1983	PT Cipta Selera Murni	Texas Fried Chicken	35
1987	PT Putra Sejahtera Pioneer	California	102
	PT Combo Sejahtera Lestari	Combo	1
	PT Firfafindo *)	Shakey Pizza	0
	PT Trijaya Pelangi	Pizza Hut	21
	PT Adiboga Cipta	Hanamasa	4
	PT Handra Wina Pelangi	Dairy Queen	0
	PT Biru Fast Food Nusantara	A & W	15
	PT Matahari Putra Prima	Matahari	4
	PT Era Baru Mas Industries	Hoka-Hoka Bento	15
	PT Honorindo Cemerlang	Tanzil Fried Chicken	17
	PT Sari Prima Nikmat	Free Time	2
1989	PT Gemilang Arta Mas	B & M Burger	2
	PT Griya Cipta Selera Fast F	Grandy's	4
	PT Hero Supermarket	Hero	8
	American Hamburger Restau.	American H	2
	PT Mitra Sejahtera Pioneer	California Fried Chicken	21
	PT Aneka Sawira Sari Food	Kantin Murah dan Bagus	8
	PT Potensi Mulya	Burger King	5
	PT Anam	BIP Fast Food	3
	PT Putra Asia Perdana Indah	California	10
	Jawa Tengah Restaurant	Central Java	1
	Total in 1980s		366

Table 5.9 Profile of main fast food companies in Indonesia in 1990s.

Start of Operation	Fast food brand name holding companies	Trade mark	Total 1993
1990	PT Ratu Betala	King's Fried Chicken	6
	PT Truly Pusaka	Golden Truly	6
	PT Reca Mega Cemerlang	Burger Box	2
	PT Ramayana Lestari Sentosa	Ramayana	3
	PT Multi Sari Rasa	Big Boy	1
	PT Selera Nusantara Pratama	Nila Chandra	3
	4 Other Companies	Other	7
1991	PT Wendy's Citra Rasa	Wendy's	7
	PT Ramaco Gerbang Mas	McDonald's	7
	PT Selera Cipta Darma	Round Table	3
	PT Citra Jasa Tata Boga	Pizza Express	1
	PT Mitra Indo	Jollybee	2
	PT Era Busana	Momoyama	1
	PT Profilia & Grand	Fanda Express	1
	PT Betara Dharma	Hooks	1
	PT Dwima Upaya Mulya	Dwima F.F.	1
	PT Wiramaju Kharisma Jaya	Mitra	2
	PT Indo Sako Cemerlang	Deltaco	2
	9 Other Companies	Other	4
1992	PT Inti Rasa Loka Prima	Dairy Queen	4
	PT Putra Selera Pizza	California Pizza	17
	11 Other Companies	Other	16
1993	PT Sarana Multi Wisata	Country	0
	3 Other Companies	Other	3
	Total in 1990s		110
	Total in 1980s and 1990s		476

Source: Prepared by CIC Consulting Group from various sources.
*) no longer active (sold)

Table 5.10 Distribution system and target markets for foreign fast food, 1993.

Specification	Percentage	Consumer target
Eating at the outlet	75	family, youths & tourists
Delivery	15	office staff, part of high income family
Other system	10	uncertain
Total	100	

Source : Fast food survey by CIC, 1993.

Table 5.11 Population, economic conditions, and per capita income in Jakarta, Surabaya, Bandung, Semarang and Medan.

	Semarang	Medan	Jakarta	Surabaya	Bandung
Population[1]	8190	2457	1821	1133	1730
Proportion of household by monthly expendititure[2]:					
< 100	2.5	2.3	22.6	16.9	6.0
100-150	15.8	15.0	25.7	32.6	39.9
150-200	28.0	38.1	9.8	29.8	9.5
200-300	32.2	33.4	25.2	10.1	37.8
300-500	14.9	8.5	12.6	7.9	5.1
500-700	3.9	2.4	2.6	2.2	1.2
> 700	2.1	0.3	1.5	0.6	0.6
Total	100	100	100	100	100
per capita income[3]	1625335	1359497	2506027	1307090	1175201
Income growth					
1989	9.10	12.62	28.17	10.21	12.89
1990	8.70	9.47	7.54	12.33	10.49
1991	8.23	11.65	7.06	12.16	7.96

Source: [1]Times 1,000 in the mid-1990 (CIC Consulting Group, 1993).
[2]Total in monthly spending (Rp.000),CIC from Central Bureau Statistics, 1993
[3]Based on 1990 prices, in million rupiah, CIC 1993.
Semarang percapita income is based on 1991 prices.
Medan is based on 1989 prices.
US$1.00=Rp.1803 in 1989, US$1.00=Rp.1901 in 1990, US$1.00=Rp.1992 in 1991.

Table 5.12 Balance of fast food supply and demand by areas in Indonesia, June 1993.

Selling areas of fast food	Total demand[1]	Number of Seats[2]	Total Supply	Balance (customer)
Medan	120512	1136	85200	35312
Jakarta	1964645	29749	2231175	266330
Bandung	543311	4408	330600	212711
Semarang	130886	864	64800	66086
Surabaya	482480	3915	293625	188855
Other cities[3]	1265352	11904	892800	372552
Total	4507387	51976	3898200	609187

Source : PT Corinthian Infopharma Corpora, 1993.

[1]Quoted from data on potential visitors by areas, January 1993.

[2] Seat times 3 times 30 days, except in Jakarta 2.5 times 30 times number of seats.

[3]Including Jabotabek area.

6. GROCERY, MEAT, OTHER PRODUCT MARKET AUDIT

Overview

Trade liberalization and economic growth are some of the factors that have increased demand for high value food product imports in Indonesia. Increases in domestic and import demand has strained the Indonesia's distribution system. In general, wholesalers and retailers react with a considerable lag to changes in consumer demand (Business Asia, 1993). Changes have been taking place in the distribution system in the Indonesian market. Traditional markets and wet markets provide services along with newer forms of retailing, such as self-service supermarkets. Those supermarkets emerged to fill the need of some of the middle and upper level of income. Indonesia is experiencing a fast growth in supermarket chain development. In Jakarta alone, in 1993, there are 300 supermarkets (Agexporter, 1993). Jakarta has 8.2 million people and their annual disposable income ranges from US$1776 to more than US$4200. There are more than 500 supermarkets nationwide (Bow and Ford, 1993). There are three large supermarkets that are considered as the major players in the retail industry. These supermarkets also have stores in other cities outside Jakarta. Hero supermarkets have more than 50 stores (Agexporter, 1993). In 1993, for the first time, Makro, a warehouse-type wholesale company opened to the public.

Besides economic growth and trade liberalization, a number of other factors are driving forces behind the change in food as well as non-food retailing in Indonesia. One of them is the increasing number of women joining the work force. The role of women in many aspects in Indonesia is changing. In 1980, the female work force participation rate was 33 percent, while in 1987, this percentage increased to 45 percent. However,

only 6.6 percent of jobs held by women are categorized as white collar jobs (Wright, and Crocket Tellei). In Indonesia, women are usually the one responsible for providing the meal for the family. As they become busy with work, they need food that is easy to prepare and they prefer to shop in supermarkets because it is more convenient.

Competition

Grocery Companies

Table 6.1 shows imported food products and their countries of origin. Some of the supermarket companies import products directly, some have related companies that are importers, and some deal with independent importers. Some specialty shops directly import products. Some importers consolidate and document mixed containers of U.S. products and sell the products to distributors, retailers or supermarkets. Groceries have the highest percentage of products imported and sold by specialty shops. Some specialty shops target expatriate and high income groups, and import a relatively high percentage of grocery products. General supermarkets stock a lower percentage of imported groceries. Imported products sold in Indonesia are crackers, cookies, canned fruits, canned vegetables, canned meats, cereal, popcorn, baby food, candy, peanuts, and salad dressings. Kellogg cereals are imported from Korea because of their low price. Australia also markets cereal, Sanitarium, and has an agent that directly markets its product. Dairy products include yoghurt, cheese, butter, and margarine. Imported frozen foods marketed in Indonesia are frozen meats, vegetables, french fries, potatoes, broccoli, peas, corn, and cauliflower.

The competition for grocery products seems to be greater than other products. Australia, Singapore and New Zealand are the main competitors for all of product categories. Singapore is used as a base by many exporters from U.S. Storage and warehouse facilities in Singapore are better than in Indonesia. This is one of the problems faced by Indonesian importers. They prefer to deal directly with the exporters. Individual imported products in Indonesia are required to have a registration number from the Health Department. Individual documents for each product in a mixed container must be provided. Singapore usually cannot provide necessary documents required by the Indonesian health authorities for each product in a mixed container in order to fulfill customs requirements. Buyers in Indonesia are aware of registration numbers from the Health Department. Registration numbers from the Health Department indirectly protect the products from other importers since only one registration number is allowed for each brand. Importers are interested in becoming direct agents of specific products from the U.S. The Health Department will issue a registration number for a specific product only to a direct agent for the product. Moreover, companies in Singapore may send the products to Indonesian companies with a short expiration date, about one year. This causes importers in Indonesia to have difficulty in marketing their products given the short expiration date of the products. Delivery time and out of stock are other problems that cause grocery stores to gain less profit and credibility that finally affects their ability to compete in the market.

Table 6.2 shows the ratings of sources of advantage of U.S products over competing suppliers. Factors heavily favoring U.S. suppliers are customer acceptance and nutritional value. Price is rated the lowest. The customers that buy imported products, especially in specialty stores, are frequently expatriates with high income.

Moreover, one complained that not all U.S. products have expiration dates. Time of delivery is not a problem on the average, even though some companies that import directly from the U.S. sometimes have problems with receiving goods in a timely fashion. Advertising support is rated average, neither an advantage nor disadvantage for the U.S. supplier. Some companies suggest that U.S. products still need advertising support because many customers are not aware of the products.

Factors that could limit market growth are lack of refrigerated truck/transportation and advertising costs. For perishable and frozen products, lack of refrigerated trucks is the most important limiting factor. Large cities in Indonesia are geographically dispersed even on Java. Price is considered a factor that could limit market growth. The most effective strategy to develop new business for grocery products is a personal visit (Table 6. 6). Some companies consider trade shows and introduction by colleagues as the most effective method. Long term contracts and short term credit with suppliers are used. One grocery chain is doing production contracts for store labels for a small percentage of their products. Some companies that import directly, channel all of their products to distributors and specialty retailers. Other companies have a variety of customers including food processors, food packers, distributors, large retail stores, smaller retailers, specialty retailers, hotels, and restaurants.

Meat and Other Products Category

Meat and other product category companies were grouped separately. Table 6.3 shows the ratings of sources of advantages for U.S. products over competing suppliers. For the meat category, the factor that favor the U.S. supplier is customer acceptance. Beef from U.S. is priced higher than beef from Australia. However, price on the

average was not rated as a significant problem. The customers can differentiate the taste of U.S. beef and Australian beef. American beef is grain feed beef and Australian beef is grass fed. Brand name and advertising support are a source of disadvantage for the U.S. suppliers. Advertising is required for U.S. products especially for frozen meats (unprocessed and processed). Indonesian consumers think that these products use a lot of preservatives due to the long distance between the U.S. and Indonesia. Moreover, one of the meat companies complained that the labelling system related to shelf life on food products is a disadvantage for U.S. suppliers because they sometimes put the manufacturing date on the product instead of the expiration date. When a product is sold in Indonesia, consumers will sometimes see the manufacturing date and think that it is expired. Animals for which their meat will be marketed in Indonesia have to be slaughtered according to Halal or Moslem rule, so, the "Halal" requirement is met. Moreover, Halal restrictions seem to be fulfilled by the exporters. Other factors received ratings that indicate neither a major advantage or disadvantages for U.S. suppliers.

Products imported by companies included in other product categories are dairy products, beverages, many kinds of starch, and American health food. Dairy products in Indonesia, especially powdered milk, are mostly imported from Europe. U.S. companies are considered less flexible. One company stated that a Japanese company will have people who work continuously with their company for more than 10 years. This close relationship makes that company easier to work with and also to grow. U.S. companies have difficulty finding people who will make long-term commitments in Indonesia. Frequently, personnel changes becomes a disadvantage for U.S. companies that could retard company growth. Each time the U.S. companies provide a new person, new relationships must be established. U.S. companies are also less flexible in contract

arrangements. European and Japanese companies are more flexible in doing business contracts which depend on the current Indonesian market demand.

In 1985, the Indonesia government listed powdered milk as one of the items in the negative investment list. Powdered milk must be imported in bulk form and then is packaged in Indonesia. One cited that brand is not important for powdered milk in Indonesia. However, quality and price are the most important factors. Moreover, powdered milk produced domestically lacks quality and the price is still relatively expensive. The Indonesian government assigned PT Pantja Niaga to import powdered milk. Private companies bought from that company. The private companies also have to fulfill the ratio requirements of import to domestically produced powdered milk by 1:1.2. Cheese from other sources are considered cheaper than that from the U.S. For stabilizer products, Indonesian prefer Japanese products rather than U.S. products. For beverage, the duty (100 to 150 percent) is an important barrier. So, price is really a disadvantage. For starch products, the freight cost is a barrier to import from the U.S. Price can be a disadvantage for the U.S. product. Other disadvantage factors are prices that are not negotiable, and shipment times.

On average, price, payment term, exporter relationship, and government regulations are disadvantages for the U.S. supplier for the other products category (Table 6.3). Customer acceptance, nutritional value, shelf life, and brand name are factors that heavily favor the U.S. suppliers. The most effective method to develop new business for meat companies is introduction by colleague (Table 6.6). For other product categories, trade shows and personal visits are the most effective method to develop new business. Many arrangements are used in the company's business. Most of the companies use more than one type of buying arrangement. Long term contracts with the supplier and

short term credit are used most frequently. One meat company is using long term contracts with a buy-back guarantee agreement.

One meat company sells only to large retail stores and smaller retail grocery stores. The rest sell meat to food processors, distributors, large retail stores, special retailers, hotels, and restaurants. For other product categories, some of the companies sell almost all of the product to food packers. The rest sell products to distributors, large retail stores, smaller retailers, and special retailers.

Market Opportunities

According to Survey Research Indonesia, the middle class in Indonesia is a family with shopping bills of more than $140 a month (Jacob, 1994). The high income 10 percent approximately represent 18 million people which is equivalent to the size of the market in Australia (Slamet, 1993). Between this group and people living below the poverty line (15 percent of the population), there lies the majority, which represent 75 percent of the population, with a large range of income.

Supermarkets in Indonesia are frequently located inside shopping malls or in real estate complexes. The product mix and mode of operation are different from the original western supermarket. In Indonesian supermarkets, frozen food, fresh vegetables, and fresh meat are sold in small quantities. Fresh meat and fresh vegetables are available in most traditional wet markets daily with cheaper prices. However, canned food, confectionery food, cereals, dairy products, and other imported grocery products are sold in supermarkets. Beef imports are sold in large supermarkets such as Sogo or in specialty stores. Since the supermarkets continue to multiply, people can shop in a more convenient place, have wider range and better quality of goods available, and receive

superior service in clean, and usually air conditioned stores. Moreover, commercial advertising on TV has had an enormous impact, especially on the middle class (Bow and Maggie, 1993).

Indonesian people consider many things that comes from developed countries especially the U.S., as modern. Goods from the West are considered good and prestigious. Fortunately for the U.S., mall, franchise, and supermarket concepts are viewed as a modern and desirable concepts of life. Many Indonesian restaurants have been serving fast food. However, the way Indonesian consumers view fresh products are different from the U.S. especially for meat and vegetables. Frozen meat and vegetables are considered as containing a lot of preservatives and are potentially not fresh. A lot of Indonesians like to be considered as modern. Shopping in the supermarket is one characteristic of a modern person. So, not only do the middle income and high income group shop in supermarkets, but some of the lower income group also shop in the supermarket. However, the frequency of shopping between those income groups are very different. The higher income bracket will shop more frequently in the supermarket, since the higher income group (5 to 10 percent of the population) can afford to regularly shop at supermarkets (Slamet A, 1993). However, lower income groups come to supermarkets more for sightseeing. The dollar value of imported products sold in those supermarkets ranged from 2 million to 19.9 million dollars in 1992.

The development of the franchising industry also greatly influences the development of the supermarket. Cooperation between supermarket and franchisees in providing their service together in one spot showing that the development of one influences the others. Moreover, franchising industries also influence Indonesian eating habits.

Conclusions

For grocery products, the advantages the U.S products have over its competing suppliers are customer acceptance and nutritional value. Moreover, factors that can limit market growth are lack of refrigerated truck/transportation and advertising costs. Product registration numbers from the Health Department are important. A short expiration date is still a problem that is a disadvantage for the U.S. products in the short as well as long run.

For meat, customer acceptance is the only factor favoring the U.S. products. Brand name and advertising support are the source of disadvantage for the U.S. suppliers. Especially for frozen meat, advertising support is heavily required. Labelling systems related to the expiration date should be given more attention. For other products, customer acceptance, nutritional value, shelf life, and brand names are factors that heavily favor the U.S. suppliers. However, price, payment terms, relationships with exporters, and government regulations are disadvantages for the U.S. suppliers. Moreover, maintaining personal relationships and flexibility in doing business contacts are a big concern for Indonesian companies. Those factors are very often heard as complaint from Indonesian companies about their U.S. suppliers.

The most effective way to develop new business with grocery and other product category is personal visits and introduction by colleagues for meat companies. Long-term contract and short-term credit are the method of payment most often used by grocery, meat, and other products companies.

Trade liberalization, economic growth, a density of population, ten percent of high income level, development of franchise industry and retailing, psychological and

cultural acceptance are factors that increase the demand for high value food products in Indonesia. Some of those factors are related to each other. Given the result of the market research, consumer attitudes toward U.S products are positive given the acceptance of U.S products ranked high for groceries, meat, as well as other products. Australia, Singapore, and New Zealand are the main competitors in these product categories. However, Singapore is generally a transit port for all of those products. A direct relation with the importers and maintaining a good relationship will reduce the role of Singapore as an intermediary in the market.

Table 6.1 The most important countries of origin for HVFP in Indonesia, 1993-94..

Products	Countries of origin
Fresh & frozen meat	USA, Australia, New Zealand, France
Groceries	USA, Japan, Australia, Italy, China, Singapore, Thailand
Fresh fruits	Australia, USA, Canada, Singapore, Thailand
Fresh vegetables	Australia, Singapore
Frozen food	Netherlands, Australia, USA, New Zealand
Beverages	USA, Singapore, Europe, Australia, Thailand
Dairy products	Australia, New Zealand, USA, Europe

Table 6.2 Average ratings by nine grocery companies of factors in terms of advantages for U.S. suppliers (1 meaning disadvantage for U.S. supplier, 6 meaning a great advantage for U.S. supplier).

Possible source of advantage	Mean rating	Standard deviation
Customer acceptance	5.57	0.79
Nutritional value	5.00	0.89
Payment term	4.83	0.98
Experience with suppliers	4.57	1.81
Labelling in Indonesia	4.50	1.76
Freshness	4.40	1.52
Halal restriction	4.40	1.14
Packaging	4.25	1.98
Brand name	4.25	1.98
Government regulations	4.00	0.93
Make time delivery	3.71	2.29
Advertising support	3.63	1.92
Shelf life	3.43	1.62
Price	3.00	2.00

Table 6.3 Average ratings by three meat companies and five other category companies of factors in terms of advantages for U.S. suppliers (1 meaning disadvantage for U.S. supplier, 6 meaning a great advantage for U.S. supplier).

Possible source advantage	Mean rating for meat companies	Mean rating for other product categories
Freshness	3.67	3.00
Price	4.00	1.60
Halal restriction	3.00	-
Customer acceptance	5.00	6.00
Payment term	4.00	2.00
Nutritional value	4.00	6.00
Relation with exporters	3.67	2.00
Making time delivery	4.33	3.50
Packaging	3.67	4.00
Labelling in Indonesia	4.00	3.50
Shelf life	3.33	6.00
Brand name	2.67	5.75
Advertising support	2.50	3.33
Government regulations	3.00	1.75

Table 6.4 Rating of the importance of factors that limit the market growth for grocery companies (using 6 value scale where 6 is very important and 1 is very unimportant).

Description	Mean rating	Standard deviation
Lack of temperature controlled truck/transpor.	5.00	0.82
Consumer advertising cost	5.00	2.00
Price/cost too high	4.86	1.46
Food handling methods and food safety	4.29	1.70
Development of domestic products	4.29	2.06
Lack of temperature controlled storage	4.25	1.26
Consumer consumption habit	4.17	1.83
Import taxes, fees	3.86	2.12
Difficult to develop brand recognition	3.71	2.06
Government trade regulations	3.71	1.80
Willingness to meet hallal standard	3.60	1.67
Consumer acceptance of foreign products	3.57	2.30
Income population	3.42	1.81
Brands are not recognized	3.42	2.15
Road/rail system	3.33	1.03
Lack of labelling in Indonesia	2.71	1.38
Unwillingness to adjust package size	2.57	1.62

Table 6.5 Rating of the importance of factors that limit the market growth for meat companies and other products category companies (using 6 value scale where 6 is very important and 1 is very unimportant).

Description	Mean rating for meat	Mean rating for other products
Income population	5.00	5.00
Road/rail system	1.00	1.75
Willingness to meet hallal standard	3.50	1.00
Consumer acceptance of foreign products	6.00	3.75
Brands are not recognized	6.00	4.20
Lack of temperature controlled truck/transport.	1.50	1.00
Food handling methods and food safety	5.00	3.33
Development of domestic products	4.00	4.00
Unwillingness to adjust package size	6.00	5.00
Lack of labelling in Indonesia	2.00	4.50
Lack of temperature controlled storage	3.00	2.50
Difficult to develop brand recognition	6.00	3.33
Consumer advertising cost	6.00	5.00
Government trade regulations	4.50	3.50
Price/cost too high	6.00	2.67
Consumer consumption habit	6.00	5.60
Import taxes, fees	5.00	5.00

Table 6.6 Strategy of new business development (six scale value, 6 is the most effective strategy for developing new business and 1 is the least effective method).

Description	Grocery companies mean rating	Meat companies mean rating	Other product companies mean rating
Trade Show	4.75	3.50	5.40
Personal visit	5.25	4.00	5.40
Mailed brochure	3.38	3.00	3.20
Introduced by colleague	4.50	6.00	4.00
Attend trade meeting	2.75	2.00	2.80
Business consultant	1.75	1.00	1.80
Introduced by government	1.63	1.00	1.60

CHAPTER III

DEMAND AND COMPETITION AMONG SUPPLY SOURCES FOR THE INDONESIAN FRUIT IMPORT MARKET

Introduction

U.S. exports of high value food products to Indonesia have increased almost 300 percent from $11 million in 1990 to more than $33 million in 1993 (Agricultural economy and policy, 1994). Imports of U.S. fruits have been an important component of the increase. Washington red delicious apples are recognized by most people in Indonesia, particularly in urban areas. Among U.S. exports of high value food products to Indonesia, fruit exports account for the greatest value, accounting for $16 million. Processed fruits and vegetables, largely frozen french fries, are the second and the third with value of $6 million and $4 million (U.S. Bureau of the Census trade data).

Prior to 1981, fruit importing was done by general importers. In 1981, fruit importing was restricted to two licensed state trading companies: PT Tjipta Niaga and PT Kerta Niaga. From 1981 to 1991, fruit imports decreased dramatically and the cost per unit of imports increased. In June 1991, fruit importing was deregulated as a part of a general deregulation program. Tariffs of 562 commodities (six percent of all imported items) were reduced to forty percent or below, pushing the import-weighted average tariff down to ten percent from twenty-two percent in 1985. In

agriculture, non-tariff barriers have been eliminated on imports of beef, chicken, several fish products and many fruits (Schwarzt, 1991). The deregulation in the fruit import market had dramatic affects. Fruit imports increased and became available on nearly every street corner in Jakarta, Indonesia's capital city.

Government restrictions on import from 1981 to 1991 were designed to protect and support local industry development. Indonesian fruit production is characterized by many relatively small production units. The trade protection from 1981 to 1991 did not create the desired supply response and the production continued to fluctuate from year to year. Avocado, orange, lanzon, durian, waterapple, mango, pineapple, papaya, banana, rambutan, salacia, and sapodilla are produced widely in Indonesia. Avocado, papaya, orange, pineapple and banana are produced throughout the year and their prices are relatively cheaper than those of mangoes, durian, and rambutan. Other fruits are produced in specific month in a year. Indonesia also produces an apple called "apel malang". The one that is very famous is called "apel simanalagi." However, it is still very expensive since it is not produced efficiently on a large scale. Mandarin oranges are produced in Kalimantan, Indonesia's portion of Borneo. Watermelon and grapes are also produced in Indonesia but are relatively expensive. In addition, the quality of Indonesian grapes is still low.

Indonesian people traditionally serve fruits after meals. Moreover, to entertain guests at home or at a party as dessert, Indonesian's serve fruits. Indonesian fruit consumption is still low compared to total food consumption. Banana production and consumption rank the highest among domestic fruit. Bananas are widely distributed and affordable. Figure 1 shows the percentage of average per capita monthly expenditure on fruits and other foods in Indonesia.

The objective of this study is to determine Indonesia's import demand responsiveness to price, competitors prices and expenditure for oranges, apples, and grapes imported from United States and its competitors. Fresh fruits examined are apples, oranges, and grapes. The result show the effects of increased expenditure on U.S. and competitors market shares as well as the degree of price competition between supplying countries.

Literature Review

A restricted, source differentiated, almost ideal demand system (RSDAIDS) is used in this study. In the past, the Armington trade model that differentiates imports by country of origin, has been widely applied to agricultural import demand studies. However, the Armington assumptions of homotheticity, weak separability, and single CES (constant elasticity of substitution) have been rejected by previous studies. The AIDS and double-log models with less restrictive assumptions than the Armington model have been considered as possible alternatives model (Winter and Alston, et. al). Other alternative models that have been commonly used to study demand for agricultural commodities and groups of commodities include the linear and quadratic expenditure systems, the Working model, the Rotterdam model, translog model, and hybrids of the Rotterdam and AIDS models, the CBS and NBR systems. Rotterdam and almost ideal demand systems are two competing flexible models that are most frequently used (Alston, Carter, Green, Pick; Sparks, Seale and Buxton; Colling, Lu, and Nielson; Lee, Seale, Jierwiriyapant; Dahlgran; Eales, and Unnevehr). Recently, Lee, Brown, and Seale, following Barten, employed non-nested tests to choose the model that best represents their data. However, to analyze the import demand for

products differentiated by sources, this method may lead to a different model, for each product. The RSDAIDS model avoids the problem of different models for each product.

Import allocation models have been used to investigate import demand for U.S. fresh fruit products. Lee, Seale, and Jierwiriyapant found that U.S. fresh grapefruit exports to Japan would have to compete against banana and pineapple imports in Japan and that U.S. citrus juice exports would have to compete against the juices from Brazil and Israel. Sparks found that U.S. import share will increase significantly in Singapore and a fair amount in Canada and Hongkong as the import demand for those markets increases.

Sparks, Seale, and Buxton found that the U.S. will increase its apple exports to Canada, Hongkong, Singapore and United Kingdom as the import demand of these countries increases. The results also show that the growth of Chile as a major world supplier of apples has not changed the U.S. competitive position in each of the major markets. This is perhaps because Chile's growing season is different than the U.S.

Empirical applications of the AIDS model to import demand have frequently assumed either product aggregation or block separability (Yang and Koo, 1994). Under the product aggregation assumption, products are not differentiated by sources and are perceived as the same (Hayes, Wahl, and Williams). Moreover, the block separability assumption among goods allows estimation of share equations for goods from different origins (e.g., Alston et al). The Armington model is derived by assuming block separability. Product aggregation (perfect substitutability) and block separability are very strong assumptions. The block separability assumption allows estimation of import demand of a good from different sources. RSDAIDS model is a

more general model that does not impose perfect substitutability or the block separability assumptions. Figure 2 shows how the RSDAIDS model compares to the AIDS, modified AIDS, and Armington models.

This study is the first study that examines the Indonesian fruit market and estimates all fruit demand functions together using a source differentiated model. This study contributes to the growing understanding of U.S. fruit import demand in Pacific Rim countries.

Restricted SDAIDS Models

The AIDS models is obtained from a specific parameterization of Price Independent Generalized Logarithmic (PIGLOG) cost function (Deaton and Mullbauer). The PIGLOG cost function is written as :

$$Ln[C(p,u)]=(1-u)*\ln[A(p)] + u*\ln[B(p)], \qquad (1)$$

Where A(p) is a price aggregator function of the type :

$$\ln[A(p)]=\alpha_o + \sum_i \sum_h \ln(p_{i_h}) + \frac{1}{2}\sum_i \sum_j \sum_h \sum_k \gamma^*_{i_h j_k} \ln(p_{i_h})\ln(p_{j_k}) \qquad (2)$$

and B(p) is written as :

$$\ln[B(p)] = \ln[A(p)] + \beta_o \prod_i \prod_h p_{i_h}^{\beta_{i_h}}, \qquad (3)$$

where α, β, γ^* are parameters. The subscript i and j are goods (i,j=1,...,N); in this case, oranges, apples, and grapes, and h and k denote goods from different sources (products). For each good, the number of sources or products is not necessarily the same. The good i may be imported from m different origins while the good j may have n import sources. If $i \neq j$, h=1,...,m and k=1,...,n. By taking the derivative of (1) with respect to the price, a system of demand equations can be written in share form as:

$$w_{i_h} = \alpha_{i_h} + \sum_j \sum_k \gamma_{i_h j_k} \ln(p_{j_k}) + \beta_{i_h} u \beta_o \prod_i \prod_h p_{i_h}^{\beta_{i_h}} \qquad (4)$$

Where $\gamma_{i_h j_k} = 1/2(\gamma^*_{i_h j_k} + \gamma^*_{j_k i_h})$, w_{i_h} is the share of good i from country h.

Furthermore, taking the derivative of the cost function with respect to u and substituting that into equation (4) results in the Source Differentiated AIDS (SDAIDS) in expenditure share form as:

$$w_{i_h} = \alpha_{i_h} + \sum_j \sum_k \gamma_{i_h j_k} \ln(p_{j_k}) + \beta_{i_h} \ln(\frac{E}{P^*}) \qquad (5)$$

where

$$\ln(P^*) = \alpha_o + \sum_i \sum_h \alpha_{i_h} \ln(p_{i_h}) + \frac{1}{2} \sum_i \sum_h \sum_j \sum_k \gamma^*_{i_h j_k} \ln(p_{i_h}) \ln(p_{j_k}) \qquad (6)$$

To ease the computation, the Stone index has been used extensively as a linear approximation for the price index (P*) since that price index (P*) is not linear. The Stone index here is defined as :

$$\ln(P^*) = \sum_i \sum_h w_{i_h} \ln(p_{i_h}) \qquad (7)$$

Since the expenditure share in the index, w_{i_h}, is also the dependent variable, an endogeneity problem arises. Some writers use the lagged share (Eales and Unnevehr) or the average share (Haden) to avoid that problem. In addition to the endogeneity problem, the Stone index is not invariant to changes in the units of measurement of prices (Diewert; Moschini). Moschini proposed the regular price indices; the Tornqvist index, the "corrected" Stone index, and the geometrically weighted average of prices. The Tornqvist index is used in the estimation since it retains some features of the Stone index; the log linear analogue of the Paasche price index and the log

linear analogue of the Laspeyres price index (Moschini, 1995). The Tornqvist index P^T, viewed as a discrete approximation to the Divisia index, is

$$\log(P(t)^T) = \frac{1}{2}\sum_i \sum_h (w_{i_h}(t) + w_{i_h^o})\log(p_{i_h}(t)/p^o_{ih}) \qquad (8)$$

where the zero subscript denotes base period values. Instead of base period values, mean values or values at time (t-1) as a base for time t can be used for the base. Mean values are used in this research.

Using the SDAIDS model in equation (5), the import demand of different goods from different sources can be analyzed. However, SDAIDS model contains all product prices of different goods from different sources in each equation to be estimated. For example, to estimate three sources (e.g., apples, oranges, grapes) each of which has four sources, there will be 14 parameters (3 times four prices + intercept + expenditure) to be estimated in each equation. Yang and Koo imposed "block substitutability" assumption to reduce the number of parameter estimated, that is they assume $\gamma_{i_h j_k} = \gamma_{ihj}$, $\forall\ k \in j \neq i$. That is, the cross product price effects are not source differentiated while the own-price effects are source differentiated. For example, the Indonesian demand for U.S. apples exhibits the same cross-price response to grapes from all sources. If the block substitutability assumption is maintained, the SDAIDS (equation 5) model becomes the Restricted SDAIDS (RSDAIDS) model:

$$w_{i_h} = \alpha_{i_h} + \sum_k \gamma_{i_h k} \ln p_{i_k} + \sum_{j \neq i} \gamma_{i_h j} \ln(p_j) + \beta_{i_h} \ln(\frac{E}{P}) \qquad (9)$$

where $\ln(p_j) = \sum_k (w_{j_k} + w_j^o) * \ln(p_{j_k}/p_j^o)$, $\gamma_{i_{hk}}$ are the cross price coefficient of good i

from different sources h, $\gamma_{i_h j}$ is the cross price coefficient between good i and good j

where $i \neq j$, w_j^o and p_j^o denote mean values. For three goods, each of which has four products, the RSDAIDS model has only eight parameters (4 prices parameter of good i + 2 prices of other goods ($j \neq i$) + intercept + expenditure) compared to 14 in the SDAIDS model. The Marshallian price elasticities of the RSDAIDS model are :

Own-price elasticities: $\epsilon_{i_h i_h} = -1 + \gamma_{i_{hh}}/w_{i_h} - \beta_{i_h}$ (10)

Cross-price elasticities: $\epsilon_{i_h i_k} = \gamma_{i_{hk}}/w_{i_h} - \beta_{i_h}(w_{i_k}/w_{i_h})$, $\epsilon_{i_h j} = \gamma_{i_h j}/w_{i_h} - \beta_{i_h}(w_j/w_{i_h})$ (11)

Income elasticities: $\eta_{i_h} = 1 + \beta_{i_h}/w_{i_h}$ (12)

These elasticities are derived by assuming $\delta \ln P^T / \delta \ln P_j = w_j^o$ (Chalfant). Since this model can be considered as highly disaggregated for which expenditure shares are so small that compensated elasticities are approximately equal to uncompensated elasticities (Green and Alston, 1990). The general demand conditions for import behavior also can be imposed or tested as for the AIDS model. The conditions are

Adding-up : $\sum_i \sum_h \alpha_{i_h} = 1$; $\sum_h \gamma_{i_{hk}} = 0$; $\sum_i \sum_h \gamma_{i_h j} = 0$; $\sum_i \sum_h \beta_{i_h} = 0$;

Symmetry : $\gamma_{i_h j_k} = \gamma_{j_k i_h}$;

Homogeneity : $\sum_k \gamma_{i_{hk}} + \sum_{j \neq i} \gamma_{i_h j} = 0$;

Because of block substitutability, symmetry conditions among goods are not applicable. Symmetry is applied only within each good.

Data and Procedure

Annual data from 1970 through 1993 are used for this study. Indonesia fruit import are grouped into four goods: apples, oranges, grapes, and other fruits. In some years, especially during the 1984 to 1989 period, Australia, New Zealand, Chile and China did not export to Indonesia. Therefore, two origins, the U.S and rest of the world are used. Table 2 shows the average share of U.S. and its competitors for each fruit. Apples, oranges, and grapes account for 70 percent of imported fruits (U.S. Embassy, 1993). The U.S. has the largest average share in those three import fruits, and Australia always has the second. For oranges, the U.S. exports average share is 39 percent, for apples 44 percent, and for grapes 67 percent. The rest of the world, without Australia and China, contributes 24, 30, and 17 percent for each good.

Import quantity and value in U.S dollars were obtained from the Central Bureau of Statistics in Jakarta. The import price used is the unit value of imports.

The sample data available for this research are only 24 observation, so RSDAIDS model is used to avoid degrees-of-freedom problems. This model has two equations for each of the fruits and there are 7 parameters in each equation. The adding up condition across goods creates a singularity problem and the equation for other fruit was dropped.

Equation 9, the RSDAIDS model is estimated by seemingly unrelated regression (SUR) with homogeneity and symmetry conditions imposed using the SHAZAM computer program. Following Hayes, Wahl, and Williams, block

separability among goods and product aggregation can be tested by imposing the following assumption on the RSDAIDS (equation 9):

Block separability : $\gamma_{i_h j_k}=w_{i_h}w_{j_k}\gamma_{ij}, \quad \forall\, j\neq i$, (13)

Product Aggregation : $\alpha_{i_h}=\alpha_i, \ \forall\, h \in i$, (14)

$\gamma_{i_h j_k}=\gamma_{ij}, \forall\, h, k \in i, j$, and $\beta_{i_h}=\beta_i, \quad \forall\, h \in i$,

where γ_{ij} is the cross price parameter between groups i and j. It is estimated from an aggregate AIDS model where sources are not differentiated (perfect substitutability is assumed). A three-good AIDS model: oranges, grapes, and apples, is used. Two fruit groups, i and j, may be considered separable if the compensated cross price effects between the share of import fruit from source h in fruit group i and the price of import fruit from source k in fruit group j ($i\neq j$) satisfy the restriction in (13). However, j as the other fruit group is specified as a single commodity. The separability restriction is respecified as follow: $\gamma_{i_h j}=w_{i_h}\gamma_{ij}$,

The estimated γ_{ij} are in Table 1. The joint test of whether each cross price-price coefficient of the four-fruits RSDAIDS model satisfies the restriction in (13) was conducted, using the Wald-chi square test. To test product aggregation that apples from U.S. and from the rest of the world are perfect substitute, the price and expenditure coefficients in the U.S. equation and the rest of the world equation in the apples model were restricted to be equal (equation 14).

In addition to separability and product aggregation tests, an endogeneity test should be performed to test whether expenditure may be endogenous. If the

endogenous expenditure is correlated with the error terms, estimates will be biased and inconsistent. The endogeneity is tested using the Wu-Hausman test.

If V_{i_h} is the error term in RSDAIDS model and the expenditure variable, ln(E/P*), in the model is approximated by equation 15.

$$\ln(E/P^T) = a_{i_h} + \sum_j \sum_k f_{i_h j_k} \ln(p_{j_k}) + g_{i_h} \ln(Y_t) + h_{i_h} \ln(ER_t) + i_{i_h} \ln(po) + V_{i_h} \quad (15)$$

where t is time, Y is total income (per capita GNP is used in this paper), ER is real effective exchange rate for import, p_o is the price vector of all other goods, and V_{i_h} is the random error term. The random error term is partitioned as follows

$$V_{i_h} = \xi V^*_{i_h} + e_{i_h} \quad (16)$$

where ξ_{i_h} is correlation parameter such that $E(V^*_{i_h}, e_{i_h})=0$ and e_{i_h} is independent of $V^*_{i_h}$. To test the endogeneity of the expenditure variable, the residual $V^*_{i_h}$ is included in RSDAIDS equation and the Wald-chi square test is performed for inclusion of the residual.

Results

To test whether RSDAIDS model is appropriate or not, product aggregation over different import sources and block separability assumption were tested. The results are shown in Table 4. The Wald Chi-square test statistic for the null hypothesis that oranges are separable from all others fruits (i.e., apples, grapes, and other fruits) is 69.63. Moreover, the separability tests for apples and grapes and the

joint test are 17.27, 148.88 and 235.78, respectively. The individual fruit tests and the joint test are rejected at less than the 5 percent level of significant. So, the null hypotheses that the fruit import demand can be estimated separately for each good is rejected. The Wald Chi-square test statistic for the aggregation over sources for oranges, grapes, apples and fruits imports as a whole are 15.36, 108.35, 196.67 and 320.38, respectively, and the null hypothesis that sources can be aggregated is rejected. The RSDAIDS model is found to be appropriate.

The Tornqvist index used to deflate the expenditure is constructed using the budget share, the left hand side in the RSDAIDS model. Therefore, using this price index as a deflator may cause a simultaneity problem. So, it is important to do a simultaneity test to get consistent and efficient parameter estimates (LaFrance, 1991). The Hausman test for the null hypothesis of no correlation between group expenditure and error term is conducted. The error terms from the auxiliary equation shown in Table 4, where LPOrange, LPGrape, LPApple are the price vector of products in the group, CPI is the price vector of all other goods, GNP is GNP per capita, and ER is the real effective exchange rate, are included in demand equations and tested for significance. The inclusion of exchange rate measures the effect of omitted price variables in the model. A consumer price index is used as a proxy for the price of all other goods, and total GNP is used as a proxy for total expenditure. The result for the Hausman-test indicated that the simultaneity problem is not significant. The null hypothesis of no correlation between group expenditure and error terms is not rejected at a 5 percent level of significance. The Wald-Chi square test for this test is 4.04.

The results of the Marshallian demand elasticities of the RSDAIDS model are in Table 5. The system R^2 of the model is 0.9850. For the oranges equation, the

income elasticity of both U.S. and the rest of the world are significant and positive. The income elasticity for U.S., at 1.062, indicates that U.S. will basically maintain its level of export as the Indonesia oranges import increases. The income elasticity of the rest of the world is almost unitary elastic, 1.028. The own price elasticities for U.S. and the rest of the world are both significant and negative. U.S. oranges are more price responsive than the rest of the world (-1.824 and -0.722). As the price of U.S. oranges increases (decreases) by 1 percent, the quantity demanded of the these oranges decreases (increases) more than the price. For the rest of the world, the percentage response in quantity will be less than that in price. The Marshallian as well as Hicksian cross price relationship between oranges from U.S. and from the rest of the world are not significant. Orange imports show a negative or complementary relationship with grapes. Oranges and apples and oranges and other fruit show a positive or substitution relationship.

For the grape equations, income elasticities of both the U.S and the rest of the world are significant and positive. The U.S. income elasticity is 1.087 and the rest of the world is 1.006. For a ten percent increase in real income in Indonesia, grape import demand from U.S. will increase by 10.87 percent, and from the rest of the world will increase by 10.06 percent. The own price elasticities of the U.S. is significant and elastic, -1.206. As the price of U.S. grapes increases, the quantity demanded will decrease more than that in price. The own-price elasticity of the rest of the world is not significant. The Marshallian cross-price elasticities are not significant. Grapes and oranges indicate a negative or complementary relationship in U.S. and the rest of the world equation. Grapes and apples and grapes and other fruit in the U.S. equation show a positive or substitution relationship. However, grapes

and apples and grapes and other fruit in the rest of the world equation are not significant. Apples and other fruit in the U.S. equation show a positive relationship and apples and other fruit in the rest of the world equation show a negative relationship.

Income elasticities of both the U.S. and the rest of the world in the apple equations are significant and exhibit the correct sign. The U.S. income elasticity for apples is elastic indicating the U.S. has a strong position in the apples market compared to the rest of the world, Australia and New Zealand. A ten percent increase in real income in Indonesia will increase apples import demand by 12.14 percent from U.S. and 10.37 percent from the rest of the world. Own-price elasticities for the U.S. and the rest of the world both are significant, elastic, and exhibit the correct sign. The rest of the world own-price elasticity is more elastic than U.S. (-2.935 and -1.858). The rest of the world percentage response on price decreases or increases will be greater than U.S. The Marshallian and Hicksian cross-price elasticities for apples from U.S. and the rest of the world are significant and positive. Apples from U.S. and the rest of the world are substitutes for each other. Cross price elasticities between apples and oranges are not significant in the U.S. equation as well as the rest of the world equation. Apples and grapes in the U.S. equation show a negative or complementary relationship. However, apples and grapes in the rest of the world equation show a positive or substitution relationship. Moreover, apples and other fruit also exhibit a negative relationship in U.S equation and positive relationship in the rest of the world equation.

There are differences in the results for apples and grapes. They appear to have a substitution relationship in the U.S. grapes equation, however, they appear to

have a complementary relationship in the U.S. apple equation and a substitution relationship in rest of the world apple equation. To examine the relationship further, Hicksian or compensated elasticities were calculated and are in Table 6. The results of the Hicksian elasticities for apples and grapes in the grapes and apples equations exhibit a positive sign or a substitution relationship. Some restrictions imposed on data may account for this inconsistency in the Marshallian elasticities[1].

Summary and Conclusion

The null hypotheses of separability and aggregation over sources for oranges, grapes, apples and joint test were rejected. An RSDAIDS model is found to be appropriate.

All of the expenditure elasticities are positive and significant. Those elasticities range from 1 to 1.21. Overall, U.S. fruit are more expenditure elastic than fruits from the rest of the world. That means as fruit imports increase, Indonesia imports more from U.S. than from the rest of the world. This may indicate brand preference or ability to supply. Among those fruits: oranges, grapes, and apples, expenditure on U.S. apples is the most elastic. Yang and Koo stated that market is considered as having strong export potential if demand for the product is inelastic but having income elasticities more than one. That is not the case for U.S. fresh fruit in Indonesia. Demand for oranges from the rest of the world is inelastic but expenditure elasticities for fruit from the rest of the world are all nearly unitary elastic.

[1]Homogeneity and symmetry are tested and found that theoretical restrictions of homogeneity and Slutsky symmetry are held at 5 percent level. The likelihood ratio test is 7.63 for homogeneity and 4.32 for Slutsky symmetry.

Own price elasticities for fruits imported from different sources all exhibit a correct negative sign and significant except for grapes in the rest of the world equation. Oranges imported from U.S are much more price elastic than from the rest of the world. For grapes, the own-price elasticity for U.S is much more elastic than that from the rest of the world. For apples, the own-price elasticity for the rest of the world is more elastic than that from U.S. The increase or decrease in apple prices will cause quantity from the rest of the world to increase or decrease more than that from U.S, and vice versa for oranges and grapes. The U.S average market share for apples in Indonesia is the largest compared to those for grapes and oranges and so is the own-price elasticity. U.S. own price elasticities for grapes, oranges, and apples are all elastic. To see the competition between U.S and other countries, cross-price elasticities are used. Grapes, oranges, and apples from U.S. and the rest of the world exhibit a substitution relationship.

The insignificant cross-price elasticities for oranges and grapes means that oranges and grapes from U.S. and the rest of the world do not compete in the same market. The degree of perishability and the difference in seasons for oranges, grapes, and apples are factors that might explain the differences. Among those three fruits, grapes are the least storable. Apples are more storable than oranges and grapes. The U.S. still can provide cold-storage apples during the southern hemisphere fresh season (Mathews).

Given elastic income elasticity for apples from U.S. and elastic price elasticities for oranges, grapes, and apples from U.S., the U.S. can still increase its market share especially in the apple market. Any policy that can lead to price

reduction of oranges, grapes, and apples imported from U.S. will increase revenues to U.S. exporters.

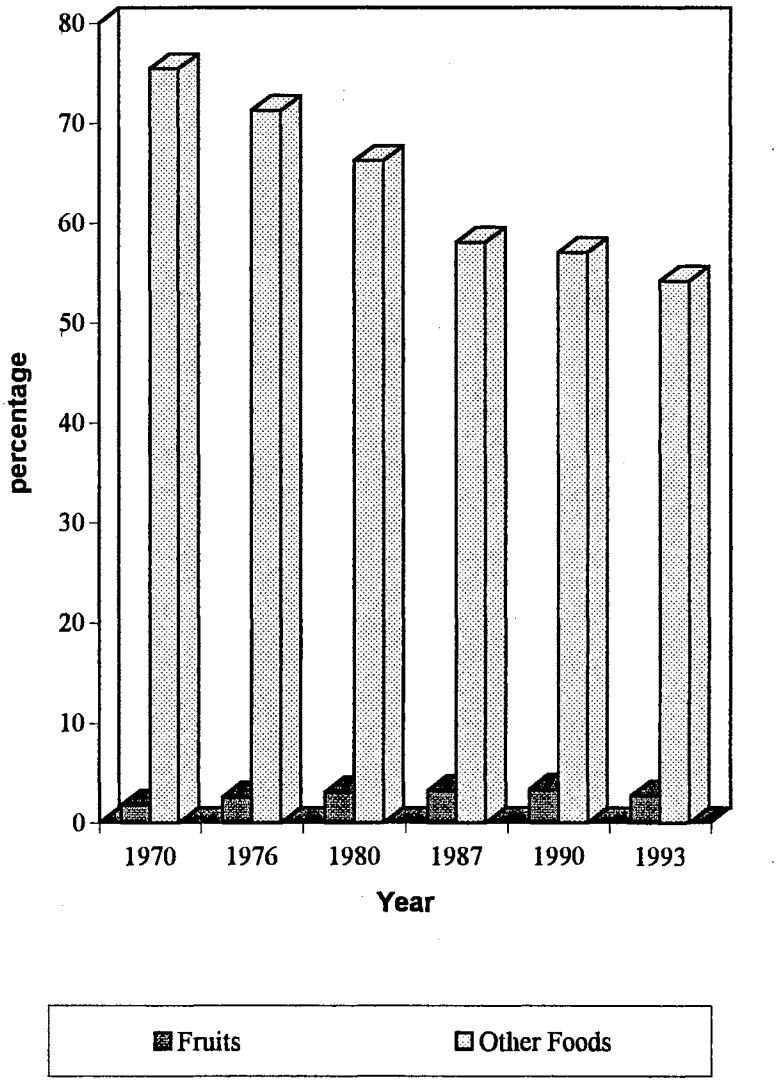

Figure 1. The percentage of average per capita monthly expenditure of fruits and other foods, 1970-1993.

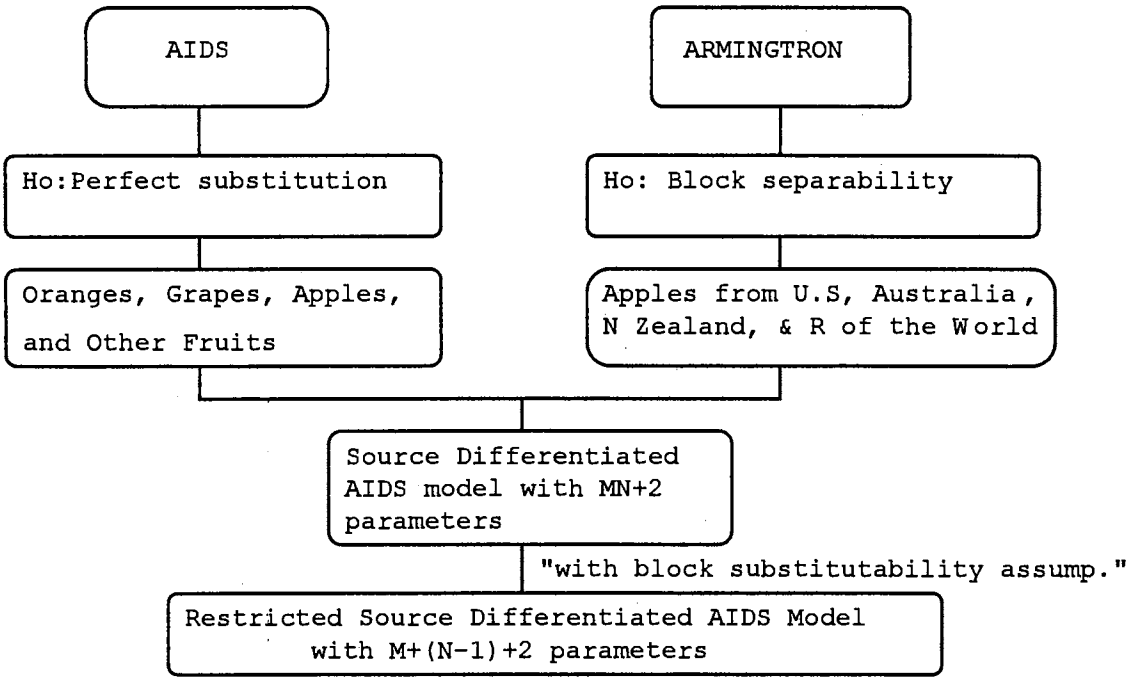

Figure 2. The source differentiated AIDS model.

Note : $i \neq j$, where $h \in i$ and $k \in j$ and $h=1,...,m$ and $k=1,...,n$.

Table 1. The result of a three-good AIDS model.

Parameters	Oranges	Grapes	Apples
LPorange	-0.047131	0.007868	-0.24069
	(0.0896)[a]	(0.0641)	(0.0920)
LPgrape	0.099955	0.04325	0.10876
	(0.0693)	(0.0496)	(0.0712)
LPapple	-0.25521	-0.11697	0.025064
	(0.2124)	(0.1521)	(0.2182)
LPofruit	0.23499	0.10885	-0.13160
	(0.1031)	(0.0738)	(0.1059)
Expenditure	0.034465	0.0227	-0.04304
	(0.0124)	(0.0089)	(0.0127)
R^2 : 0.8993			

Note: [a] LPorange, LPgrape,LPapple, LPofruit are logarithm of price of orange, grape, apple, and other fruit.

Table 2. Indonesia fruit imports from different sources, 1970-1993.

Country of origin	Average share of total fruit imports	% for each country
Oranges	0.197922	1.00000
United States	0.085685	0.39157
Australia	0.039649	0.24760
China	0.027399	0.12211
Rest of the world	0.045190	0.23871
Apples	0.439864	1.00000
United States	0.164400	0.44130
Australia	0.098872	0.20006
New Zealand	0.024842	0.06075
Rest of the world	0.151750	0.29789
Grapes	0.132318	1.00000
United States	0.088467	0.66527
Australia	0.023123	0.15242
Chile	0.002739	0.01665
Rest of the world	0.017989	0.16566
Other fruits	0.229896	1.00000

Source: Central Bureau Statistics (1970-1993), Jakarta, Indonesia.

Table 3. Summary statistics of unit value of fruit imports, 1970-1993.

Variables	Mean	Standard Deviation	Minimum	Maximum
P_{OUS}	788.72	522.33	160.42	1737.6
P_{OROW}	619.95	437.34	128.16	1482.0
P_{GUS}	1393.7	1192.10	203.98	4257.4
P_{GROW}	1226.3	1054.9	153.15	4234.0
P_{AUS}	777.26	518.95	190.89	1845.5
P_{AROW}	784.36	613.81	149.03	2646.1

Note: P_{OUS}, P_{OROW}, P_{GUS}, P_{GROW}, P_{AUS}, P_{AROW} are unit value of imports for orange (O), grape (G), apple (A) from U.S. and the rest of the world (ROW).

Table 4. Test results for block separability, product aggregation, and endogeneity.

Block Separability

Ho:Orange is separable from all other fruits
  Wald X^2=69.63** df=6
Ho:Grapes is separable from all other fruits
  Wald X^2=17.27* df=6
Ho:Apples is separable from all other fruits
  Wald X^2=148.88** df=6
Ho:All of the above
  Wald X^2=235.78** df=18

Product Aggregation

Ho:Oranges can be aggregated
  Wald X^2=15.36* df=4
Ho:Grapes can be aggregated
  Wald X^2=108.35** df=4
Ho:Apples can be aggregated
  Wald X^2=196.67** df=4
Ho:All of the above
  Wald X^2=320.38** df=12

Auxiliary Regression of Total Expenditure to test for Endogeneity

Ln(E/PT) = 37.16 - 3.16*LPOrange - 1.14*LPGrape + 1.88*LPApple -
2.42*LPOfruit
(17.01) (0.89) (0.84) (3.03)
(1.27)
+ 2.22*CPI + 1.43*GNP - 1.30*ER
(2.48) (2.22) (1.83)

Note: (*) significant at 5 and 1 percent significant level respectively.

Table 5. Marshallian elasticities of Indonesia fruit import demand, 1970-1993.

Products	U.S. Equation	R O W equation
Oranges		
PO_{US}	-1.8237 (0.4333)**	-0.1298 (0.1433)
PO_{ROW}	-0.1738 (0.2761)	-0.7220 (0.1850)*
P_{Grapes}	-0.7181 (0.5450)	-1.2744 (0.2420)**
P_{Apples}	1.2300 (0.3361)**	0.4177 (0.1720)*
P_{Ofruit}	0.4242 (0.2750)	0.6807 (0.1271)*
Y	1.0617 (0.0547)**	1.0278 (0.0276)**
Grapes		
PG_{US}	-1.2060 (0.1533)**	0.2051 (0.2758)
PG_{ROW}	0.0998 (0.1420)	-0.3412 (0.6523)
$P_{Oranges}$	-0.7976 (0.2389)**	-1.0631 (0.4609)*
P_{Apples}	0.5279 (0.2215)*	-0.2910 (0.7550)
P_{Ofruit}	0.2885 (0.1260)*	0.4840 (0.2470)
Y	1.0873 (0.0388)**	1.0062 (0.0801)**
Apples		
PA_{US}	-1.8582 (0.3665)**	0.9073 (0.2470)*
PA_{ROW}	1.3713 (0.2674)**	-2.9354 (0.2092)**
$P_{Oranges}$	1.7068 (0.9330)	-1.0056 (0.8467)
P_{Grapes}	-2.9561 (0.9862)*	2.5611 (0.9021)*
P_{Ofruit}	0.5041 (0.1429)*	-0.3360 (0.1319)*
Y	1.2136 (0.0332)**	1.0373 (0.0050)**
$R^2 = 0.9850$		

Note: Marshallian elasticities are calculated using these formulae:

$$\epsilon_{i_k i_k} = -1 + \frac{\gamma_{i_k i_k}}{W_{i_k}} - \beta_{i_k}, \quad \epsilon_{i_k i_z} = \frac{\gamma_{i_k i_z}}{W_{i_k}} - \beta_{i_k}\left(\frac{w_{i_z}}{w_{i_k}}\right), \quad \epsilon_{i,j} = \frac{\gamma_{i,j}}{W_{i_k}} - \beta_{i_k}\left(\frac{W_j}{W_{i_k}}\right), \quad \eta_{i_k} = 1 + \frac{\beta_{i_k}}{W_{i_k}}$$

for own-price, cross-price among fruits and sources, and income elasticities.
Standard errors are in parentheses.
One and two asterisks indicate significance at 5 and 1 percent levels.

Table 6. Hicksian or Compensated price elasticities.

Products	U.S. Equation	R O W equation
Oranges		
PO_{US}	-1.7327	-0.04173
	(0.4355)**	(0.1440)**
PO_{ROW}	-0.0546	-0.60664
	(0.2781)	(0.1864)**
P_{Grapes}	-0.5080	-1.0710
	(0.5401)*	(0.2397)*
P_{Apples}	1.3239	0.6211
	(0.3283)	(0.1684)**
P_{Ofruit}	0.4715	0.88412
	(0.2817)	(0.1302)**
Grapes		
PG_{US}	-1.1098	0.2941
	(0.1549)**	(0.2782)
PG_{ROW}	0.1482	-0.2963
	(0.1423)	(0.6537)
$P_{Oranges}$	-0.6537	-0.9299
	(0.2354)*	(0.4549)*
P_{Apples}	0.6718	-0.1578
	(0.2198)**	(0.7429)
P_{Ofruit}	0.4323	0.6171
	(0.1268)**	(0.2491)*
Apples		
PA_{US}	-1.6601	1.0766
	(0.3655)**	(0.2476)**
PA_{ROW}	1.7070	-2.6484
	(0.2675)**	(0.2099)**
$P_{Oranges}$	2.2406	-0.5493
	(0.9348)*	(0.8138)**
P_{Grapes}	-2.4223	3.0173
	(0.9789)*	(0.8489)**
P_{Ofruit}	1.0379	0.1203
	(0.1446)**	(0.1319)

Note:Standard deviations are in parentheses following the coefficient estimates.
One and two asterisks indicate significance at 5 and 1 percent levels.

CHAPTER IV

DEMAND and COMPETITION AMONG SUPPLY SOURCES FOR THE INDONESIAN BEEF IMPORT MARKET.

Introduction

The U.S. is one of seven main producing countries that export bovine meat to Indonesia and also is the largest importer of bovine meat in the world (UNCTAD, 1993). It is important for U.S. companies to assess new potential markets for meat exports especially in developing countries. Most of the rise in bovine meat consumption is likely to occur in the developing countries as a whole and in the formerly socialist countries of Eastern Europe (United Nations, 1989). The Pacific Rim region is one of the principle target markets. It is the fastest growing international market for meat products (Table 1). In South and South-East Asia, Indonesian bovine meat consumption is fourth after India, Pakistan, and the Republic of Korea in 1991 (UNCTAD, 1993). Currently, the most important outlets for American beef are Japan, Canada, the Bahamas, and Saudi Arabia (United Nations, 1989). In order to understand the market potential and market competition, beef import demand differentiated by sources of origin for Indonesia is estimated. This study will be a compliment to other studies of beef import demand in the Pacific Rim countries (Shue; Seleka; Hayes, at. al.; Lambert; Capps, at. al; Lee, at. al.; Yang and Koo).

Objectives of the Study

The objectives of this study are :

1. To provide information about Indonesian beef import trade, restrictions, and prospects,
2. To provide information about the responsiveness of beef import demand to prices and expenditures, and
3. To assess the competition among beef exporters to Indonesia.

The World Bovine Meat Market

Table 2 shows the major exporting and importing countries of bovine meat. The six largest exporters are the EEC, Australia, Brazil, New Zealand, Argentina, the U.S. and Uruguay. The U.S. shows an increasing trend in quantity exported as well as in quantity imported. However, imports have increased dramatically in Asia especially in the South and Southeast Asian countries.

A striking characteristic of the world beef market is the geographical concentration of beef production. In 1986, 69 percent of total world production was concentrated in seven countries and groups of countries, namely the United States, the USSR, the EEC, Argentina, Brazil, Australia, and Canada. Over the period of 1961 to 1973, world production grew at an average rate of 2.3 percent per year. After a sharp increased in production in all major importing countries in 1974-1976, paralleled by a decreased in imports into these countries, international market prices declined and herd liquidation progressed. The long term expansion of beef and veal production came to a halt in 1979 and the production decreased in 1979-1982, reflecting decreased demand

in many countries, increased costs of production and cyclical trends. The stagnation of bovine meat output was accompanied by a rapid growth in production of other meats, particularly poultry. From 1983, however, production began to rise again, and the average rate of growth in 1983-1986 was 2 percent per annum (United Nations, 1989). The world beef market faced instability in supply/demand and prices. Bovine meat consumption is heavily concentrated in industrial countries: DMECs (Developed Market Economy Countries), and socialist countries of Eastern Europe which accounted for 69 percent of world bovine meat consumption in 1986 (United Nations, 1989). The proportion of bovine meat in total per capita meat consumption varies significantly among countries, reflecting income differentials, relative prices of foodstuffs, in particular of competing products, and ethnic and religious backgrounds that influence dietary habits. Developing countries per capita consumption is still lower than developed countries. Bovine consumption in developing countries, however, has grown faster since the mid-1960s, reflecting rapid increases in income and population (United Nations, 1989). Among developing countries, the main areas of consumption growth have been the rapidly expanding economies in South-East Asia and until recently the oil-exporting countries of the Middle-East (United Nations, 1989).

Prices of cattle and beef exhibit volatility as a result of particular characteristics of both supply and demand. On the demand side, consumption is very sensitive to changes in incomes, beef prices and the relative price of competitive meats. On the supply side, beef prices are characterized by a marked cyclical behavior due to the cyclical nature of production. The basic mechanism is an inventory cycle. Increases in beef prices create an incentive for producers to increase output. However, increased output of beef only takes place in the long run by increasing the size of the cattle herd.

Cattle producers withhold female animals from the market to build breeding herds. Eventually the "building" phase is ended due to the short-term limitation of carrying capacity on farms and a fall in profit margins from fattening as the supply increases on the market. At this point, prices start to fall and cattle producers then reduce their breeding herd by selling cows, which adds even more to total production and further lowers prices. The cycle is renewed through the over-reaction of producers who cut their herd below the level where demand and supply are balanced. Prices then rise and the cycle restarts.

Indonesian Bovine Meat Trade

Indonesian meat consumption is still low. Income per capita and livestock production in Indonesia are still low. Before deregulation in June 1994, both livestock and feed policies in Indonesia worked to provide disincentives to livestock production. For all livestock production except dairy, policies have increased domestic border values by 20 to 40 percent at the same time as other policies have increased the price of feeds by 20 to 75 percent above border values (Rae, 1991). Except for dairy production, effective protection is negative for all other products: chicken meats, eggs, pork, and beef. Moreover, Indonesia's international trade in most feedstuffs is controlled by the government via monopoly import rights granted to a parastatal organization (Rae, 1991). Compared to chicken and pork, domestic beef production is not well developed in Indonesia because of constraints such as technology, feedstuffs price, and land availability for beef production. Indonesian chicken imports have dropped significantly since 1988. This drop is the result of the significant increase in domestic chicken

production. Table 3 shows the livestock population in Indonesia for various years (Central Bureau Statistics).

Trade deregulation in June 1994, however, has provided an incentive for livestock production. Tariffs for all agricultural products that are used as raw materials, and inputs for livestock production such as fish flour, shrimp flour, sorghum, and peanut meal have been reduced to zero. Tariffs for corn and all agricultural products that are used for raw material and inputs in agroindustry have also been reduced to five percent. The reduction in tariff for feedstuff should lower the cost of production and may lead to the reduction of meat prices. Import duties on meat of bovine animals (fresh, frozen, or frozen), meat of swine (fresh, chilled, or frozen), meat of sheep or goats (fresh, chilled or frozen), meat of horses, asses, mules or hinnies (fresh, chilled or chilled), are 30 percent. The latest regulation pertaining to the meat importation to Indonesia is the Agriculture Ministerial Decree No.745/Kpts/tn.240/12/1992 dated December 30, 1992. Appendix 1 contains some information of the decree. The decree contains regulations pertaining to the technical requirements for importation of meat, foot and mouth disease free requirements, packaging, and procedures for importation.

Indonesian meat expenditures in nominal term have increased steadily since 1980 (Figure 1). However, the percentage of meat expenditures to total food expenditures increased very little. Indonesian people consume more fish than meat. As income increases, the percentage of expenditures for meat increases. Indonesian per capita meat consumption is still very low compared to Japan and Korea, but it has been increasing every year. Indonesia is a populous nation (185 million) and with improving economic conditions (6.29 percent GDP growth and $701.32 of income per capita in 1992) and Indonesian meat import demand could increase in the future. Of total meat import, the

bovine meat import share in Indonesia is the highest, 65.62 percent. For bovine meat from 1975 to 1993, the main exporting countries are the U.S., Australia, and New Zealand with 18.60, 17.15, and 19.32 percent share respectively. The share of the rest of the world is 11.43 percent. The rest 33.50 percent is other meats comprised of chicken, lamb, goat, sheep, swine, fowl, liver, and offal. Table 4 shows the share of bovine meat from different sources and Figure 2 shows Indonesian beef import by sources. Imports fluctuate but show an increasing trend.

Since 1975, Indonesian beef imports from U.S. showed a steadily increasing trend. However, it has fluctuated widely from 1987 to 1993. In 1993 the value of U.S. imports is 1.4 million dollars. The peak was reached in 1987 where the value of imports was 3.0 million dollars. The U.S. exports primarily grain-fed high quality beef for the hotel and restaurant industry. High quality beef is defined as meat from cattle not over 30 months of age which have been fed 20 pounds(or 9 kg more or less) total feed per day for 100 days or more comprising a nutritionally balanced, high-energy feed concentration of at lest 70 percent grain (United Nations, 1989). In Indonesia, beef imports are marketed to hotels, restaurants, the expatriate community, and a segment of the high income class. U.S. beef is priced higher than Australian and New Zealand beef. Figure 3 shows unit value of beef imports from some important suppliers. Moreover, Table 5 shows the summary statistics of unit value of beef imports from important supplying countries.

Literature Review

Several studies about meat import demand in the Pacific Rim countries have been conducted. Japan as one of the largest importers of meat from the U.S., and has been studied extensively.

The methods used to analyze the beef market vary. Most beef import demand studies used aggregate models and focused mainly on competition among meat products. Hayes, Wahl, and William; Lambert; Wahl, Hayes and Johnson studied Japanese meat markets extensively. They used LA/AIDS (Linear Approximate Almost Ideal Demand System) model to estimate demand relationships for meat products in Japan. U.S. beef faces competition from Japanese domestic beef, Wagyu beef. Hayes, Wahl, and William found that chicken and dairy beef and chicken and pork are net complements. They also conducted tests for quasi-separability, net substitutability, and perfect substitutability. The tests indicate that Japanese Wagyu beef is considered a separate commodity to both imported beef and dairy beef. Besides beef, they also studied the Japanese pork and chicken market.

Yang and Koo studied Japanese meat import demand using Restricted Source Differentiated Almost Ideal Demand System (RSDAIDS) model. The results show that the U.S. has the largest potential for beef export to Japan. Taiwan is in a strong position in the pork market, and Thailand and China are strong in the poultry market. RSAIDS model is a modified AIDS model where the product sources are differentiated without imposing block separability. Yang and Koo are the first to assess the competition among meat exporters and meat products in one model.

Shue employed a single equation approach to estimate demand relationships for meat products in Taiwan. Seleka employed linear and log-linear models to estimate demand relationship for meat products in Hongkong. The Korean meat market was studied by Lee, Koo, and Yang. They used LA/AIDS model and tested for separability between meat products and fish, and structural change.

Taiwan, South Korea, and Japan were studied by Capps, Tsai, Kirby and Williams. Based on their results and comparison study, they found that demand elasticities for beef, pork and chicken are different among the various Pacific Rim nations. This reflects differences in economic conditions, trade policy, and the stage of development among countries in the Pacific Rim. In each nation, they found that beef, pork, and chicken are weakly separable from marine products. They used the Rotterdam model and took into account simultaneous-equation bias which arises due to the endogeneity of total expenditure. Table 6 shows estimates from literature of Marshallian own-price elasticities for selected meat products in the Pacific Rim.

Data and Procedures

Annual time series data from 1975 to 1993 are used. Source differentiated Indonesian beef import data in value and quantity are obtained from the Central Bureau of Statistics in Jakarta, Indonesia. Beef import data from 1975 to 1980 were reported in kilograms of meat of bovine animal fresh, frozen and chilled. From 1981 till now, the data is reported in kilogram meat of bovine animal fresh or chilled carcasses and half-carcasses, fresh or chilled other cuts with bone in, fresh or chilled boneless, frozen carcasses and half-carcasses, frozen other cuts with bone in and frozen boneless.

The share of bovine meat imports from total meat imports is 65.62 percent and it comes from the U.S. 19.03 percent, Australia 15.26 percent, New Zealand 19.66 percent and the rest of the world 11.68 percent (Table 4). For bovine meat, the main importers are United States (31.68 percent), Australia (21.59 percent), New Zealand (30.29 percent). The rest of the word contributes 16.43 percent in which 13.06 percent is from Singapore. Other meat are horse, swine, offal, sheep, lamb, and goat, duck and geese.

The RSDAIDS model is used to estimate beef import demand in Indonesia. The model is

$$w_{i_h} = \alpha_{i_h} + \sum_k \gamma_{i_h k} \ln p_{i_k} + \sum_{j \neq i} \gamma_{i_h j} \ln(p_j) + \beta_{i_h} \ln(\frac{E}{P}) \qquad (1)$$

where $\ln(p_j) = \sum_k (w_{j_k} + w_j^o) * \ln(p_{j_k}/p_j^o)$, $\gamma_{i_{hk}}$ are the cross price coefficient of good i from different sources h, $\gamma_{i_h j}$ is the cross price coefficient between good i and good j where $i \neq j$, w_j^o and p_j^o denote mean values.

Equation 1, the RSDAIDS model is estimated by seemingly unrelated regression (SUR) with homogeneity and symmetry conditions imposed using the SHAZAM computer program. Following Hayes, Wahl, and Williams block separability among goods and product aggregation can be tested by imposing the following assumption on the RSDAIDS (equation 1):

Block separability : $\gamma_{i_h j_k} = w_{i_h} w_{j_k} \gamma_{i_j}$, $\forall j \neq i$, (2)

Product Aggregation : $\alpha_{i_h} = \alpha_i$, $\forall h \in i$, (3)

$\gamma_{i_h j_k}=\gamma_{ij}$, $\forall$ h, k ϵ i, j, and $\beta_{i_h}=\beta_i$, $\forall$ h ϵ i,

where γ_{ij} is the cross price parameter between groups i and j. It is estimated from an aggregate AIDS model where sources are not differentiated (perfect substitutability is assumed). A two-good AIDS model: beef and other meat, is used. Two meat groups, i and j, may be considered separable if the compensated cross price effects between the share of import beef from source h in beef group i and the price of import meat from source k in other meat group j ($i \neq j$) satisfy the restriction in (2). However, j as the other meat group is specified as a single commodity. The separability restriction is respecified as follow: $\gamma_{i_h j}=w_{i_h}\gamma_{ij}$,

The joint test of whether each cross price-price coefficient of RSDAIDS model satisfies the restriction in (2) was conducted, using the Wald-chi square test. To test product aggregation that beef from U.S., Australia, New Zealand, and from the rest of the world are perfect substitutes, the price and expenditure coefficients in the U.S., Australia, New Zealand, and the rest of the world equation in the beef model were restricted to be equal (equation 3).

In addition to separability and product aggregation tests, an endogeneity test is performed to test whether expenditure may be endogenous. If the endogenous expenditure is correlated with the error terms, estimates are biased and inconsistent. The endogeneity is tested using the Wu-Hausman test.

If V_{i_h} is the error term in RSDAIDS model and the expenditure variable, ln(E/P*), in the model is approximated by equation 4.

$$\ln(E/P^T) = a_{i_h} + \sum_j \sum_k f_{i_h j_k} \ln(p_{j_k}) + g_{i_h} \ln(Y_t) + h_{i_h} \ln(ER_t) + i_{i_h} \ln(po) + V_{i_h} \quad (4)$$

where t is time, Y is total income (per capita GNP is used in this paper), ER is real effective exchange rate for import, p_o is the price vector of all other goods, and V_{i_h} is the random error term. The random error term is partitioned as follows

$$V_{i_h} = \xi V_{i_h}^* + e_{i_h} \quad (5)$$

where ξ_{i_h} is correlation parameter such that $E(V_{i_h}^*, e_{i_h})=0$ and e_{i_h} is independent of $V_{i_h}^*$.

To test the endogeneity of the expenditure variable, the residual $V_{i_h}^*$ is included in RSDAIDS equation and the Wald-chi square test is performed for inclusion of the residual.

Marshallian and Hicksian elasticities are derived from the coefficient estimates using RSDAIDS model. Those elasticities are used to discuss the results.

Results

The results of separability and product aggregation tests lead to the RSDAIDS as the appropriate model used to estimate meat import demand in Indonesia. Bovine meat or beef import demand can be estimated together with other import meat using an RSDAIDS model. The separability test conducted using the RSDAIDS model rejects the null hypotheses that beef is separable from all other meat at one percent level. The Wald Chi-square test for separability test is 25.86. The results of product aggregation test reject the null hypotheses that beef can be aggregated. The Wald Chi-square for the product aggregation test is 193.75. The null hypothesis that beef can be aggregated is rejected at one percent level. So, the restricted source differentiated AIDS model is

appropriate to estimate meat import demand in Indonesia. The endogeneity test indicates that expenditures and the error term are not correlated. The Wald-Chi square for this test is 6.17. The error term from the following auxiliary equation for the log expenditure: $Log(E/P^T)=f(Pusa, Paust, Pnzea, Prow, Pomeat, CPI, reer, gnp)$ is used as the instrument to test for endogeneity.

The RSDAIDS model is estimated by seemingly unrelated regression (SUR) estimators with the homogeneity and symmetry conditions imposed[2]. The real effective exchange rate of import is not significant in the auxiliary regression of total expenditure. Exchange rate does not significantly affect expenditures on beef.

Because of adding-up constraint, only four of the five equation which correspond directly to the RSDAIDS model are independent. To overcome this problem, the equation for other meat is dropped.

Uncompensated Marshallian demand elasticities from RSDAIDS model are presented in Table 7 while Hicksian elasticities are in Table 8.

For the U.S. equation, the income elasticity is significant and inelastic. A ten percent increase in real income in Indonesia leads a four percent increase in the quantity beef imported from United States. The own-price elasticity is also significant and inelastic. The demand for U.S. beef is not highly responsive to the price changes. Moreover, in the U.S. equation, the Marshallian cross-price elasticities are all significant except for the rest of the world and other meat. The U.S. and Australian beef exhibit

[2]The homogeneity restriction is found to hold. The likelihood ratio test for homogeneity is 11.35. The symmetry restriction is rejected at 1 percent level of significance. The likelihood ratio test for symmetry is 17.98.

a negative or complementary relationship, while the U.S. and New Zealand exhibit a positive or substitution relationship in Indonesian market.

The income elasticity in the Australia equation is also significant and elastic. A ten percent increase in real income in Indonesia will increase the demand for Australian beef by twelve percent. The own price elasticity is significantly negative and elastic. Beef from Australia and U.S. indicate a negative or complementary relationship. In the Australian equation, Marshallian elasticities of New Zealand and the rest of the world are insignificant.

For the New Zealand equation, the income elasticity is positive, significant and inelastic. A ten percent increase in real income in Indonesia leads a seven percent increase in demand for New Zealand beef. The own-price elasticity is significant, negative and inelastic. For the cross-price elasticities, the results of the New Zealand equation is consistent with the U.S. equation. The cross-price elasticities among New Zealand beef and Australian beef, the rest of the world beef and other meat are insignificant.

For the rest of the world equation, the income elasticity is significant and close to unitary elastic. A ten percent increase in real income in Indonesia will increase the demand for the rest of the world beef by ten percent. The own-price elasticity is significant and unitary elastic. So, the rest of the world will maintain its market share as the price decrease or increase. None of the cross-price elasticities is significant.

Beef and other meat competition is represented by cross-price elasticities between imported beef from different sources and other meat. Marshallian cross-price elasticity between beef from Australia and other meat is the only one that is significant and positive. Beef from Australia and other meat exhibit a substitution relationship. The

reason may be that the Australian average unit value of import is the second lowest after other meat.

Uncompensated Hicksian elasticities reported in Table 8 confirm the results of the Marshallian elasticities and have the same sign as the Marshallian elasticities.

Summary and Conclusions

Separability concluded that beef cannot be separated from other meat and beef cannot be aggregated across sources. So, meat demand is estimated using RSDAIDS model. Expenditure is found not to be correlated with the error term.

All expenditure elasticities are positive and significant. Beef imported from Australia is the most elastic. Beef imported from the U.S. is the most inelastic. Reflecting the fact that it is a specialized high-value market. This suggests that as beef imports increase, Indonesia will import more from Australia than from the U.S.

Own-price elasticities are all negative and significant. All the own-price elasticities are inelastic. Other studies on beef import demand in the Pacific Rim region found inelastic own-price elasticities (Shue; Seleka, Hayes, at. al; Capps, at. al; Lee, at. al; Koo and Yang). Yang and Koo stated that this may be caused by quantity restrictions such as quota on beef imports in those countries. With a larger import demand for beef, quota system make beef imports were insensitive to price changes. Different methods, time periods, and aggregate or disaggregate type of estimation make the comparison of results difficult.

Marshallian cross-price elasticities between U.S. and Australia exhibit the negative sign and are significant. Beef from U.S and beef from Australia are complement in Indonesian market. Yang and Koo found that U.S. and Australian beef in Korean market

do not substitute each other in the same market segment due to quality differences. Moreover, Marshallian and Hicksian cross-price elasticities for beef from U.S. and New Zealand are significant and exhibit a positive or substitution relationship. Given insensitive own price elasticity and inelastic response of imports to expenditure, Indonesia is not regarded as having a strong export potential for U.S, New Zealand, and the rest of the world beef. The expenditure elasticity of Australian beef is the most elastic, and the own-price elasticity is elastic. So, Indonesia is not regarded as having a strong export potential for Australian beef either.

New Zealand has the highest average market share in beef market in Indonesia, however, Australia is the strongest competitor for U.S. beef. Price is an important factor determining the preferences in Indonesia. Australian beef is cheaper than U.S. beef. Quality differences may matter for high income and tourist market segment. Given the income elasticities and own-price elasticities, New Zealand and the rest of the world also have better performance in the Indonesian market.

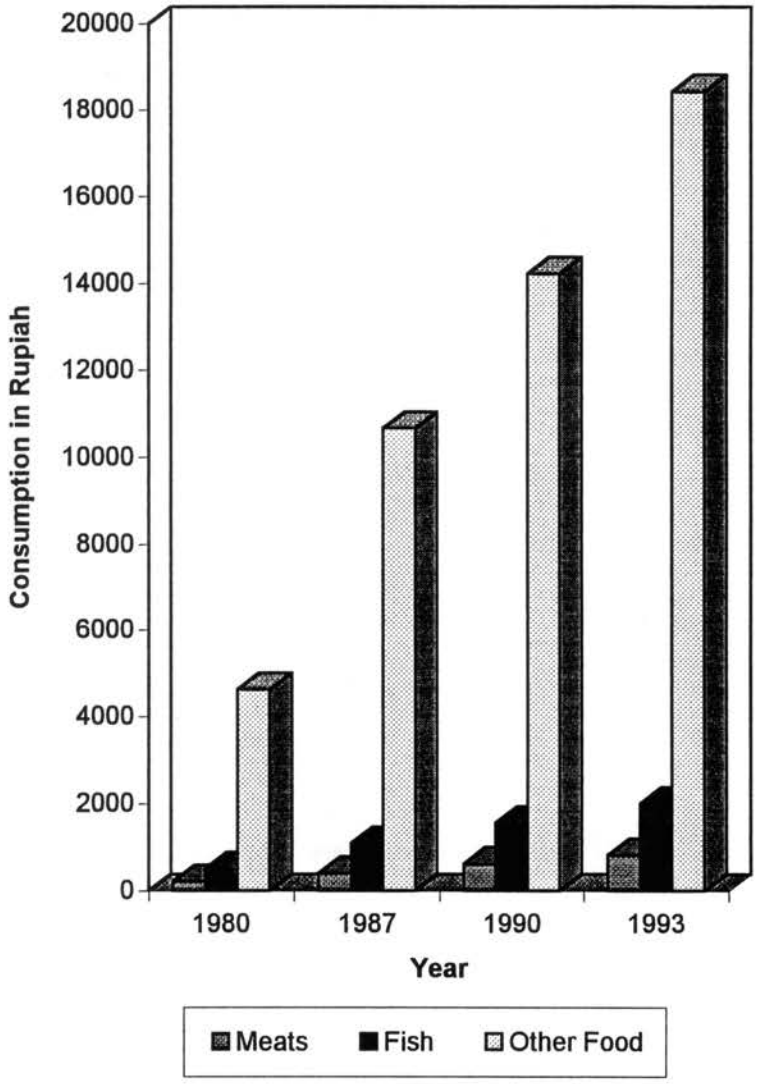

Figure 1. Average monthly expenditure on meats, fish and other food in Indonesia, 1980-1993.

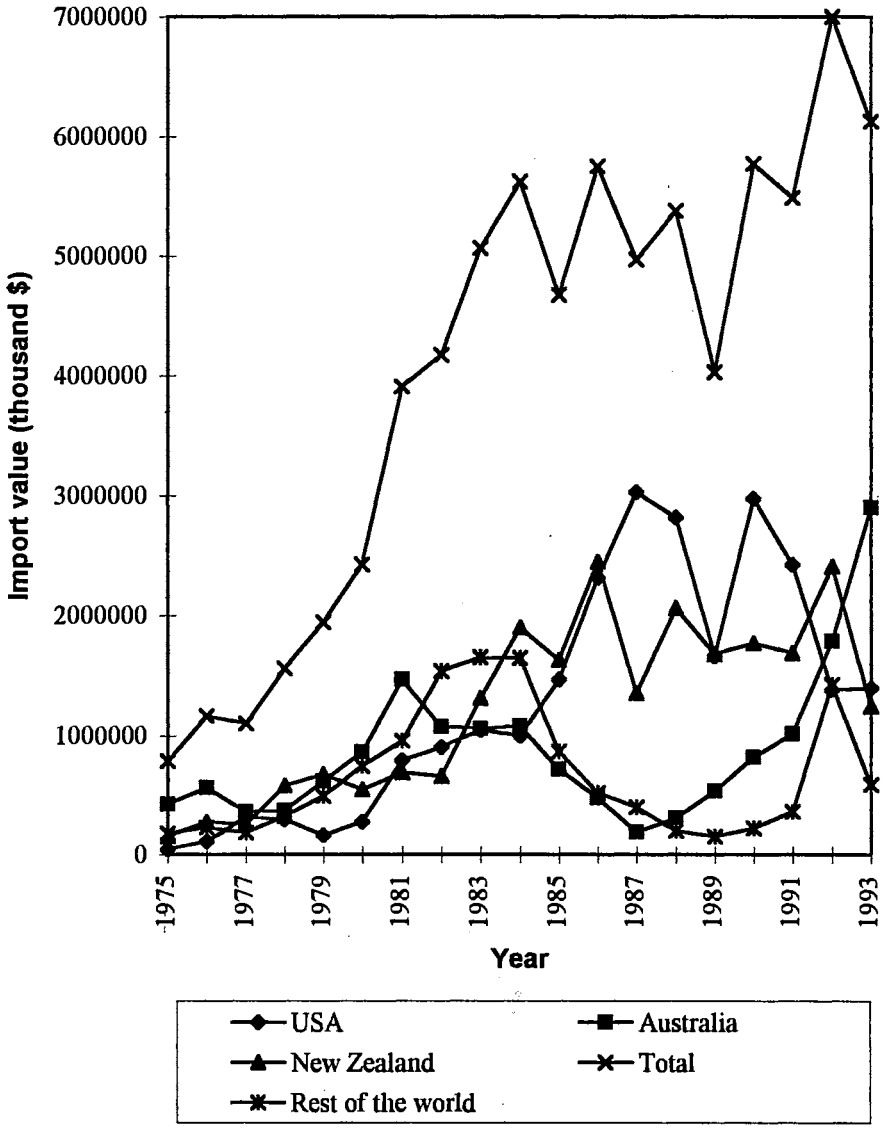

Figure 2. Indonesia beef imports by sources, 1975-1993.

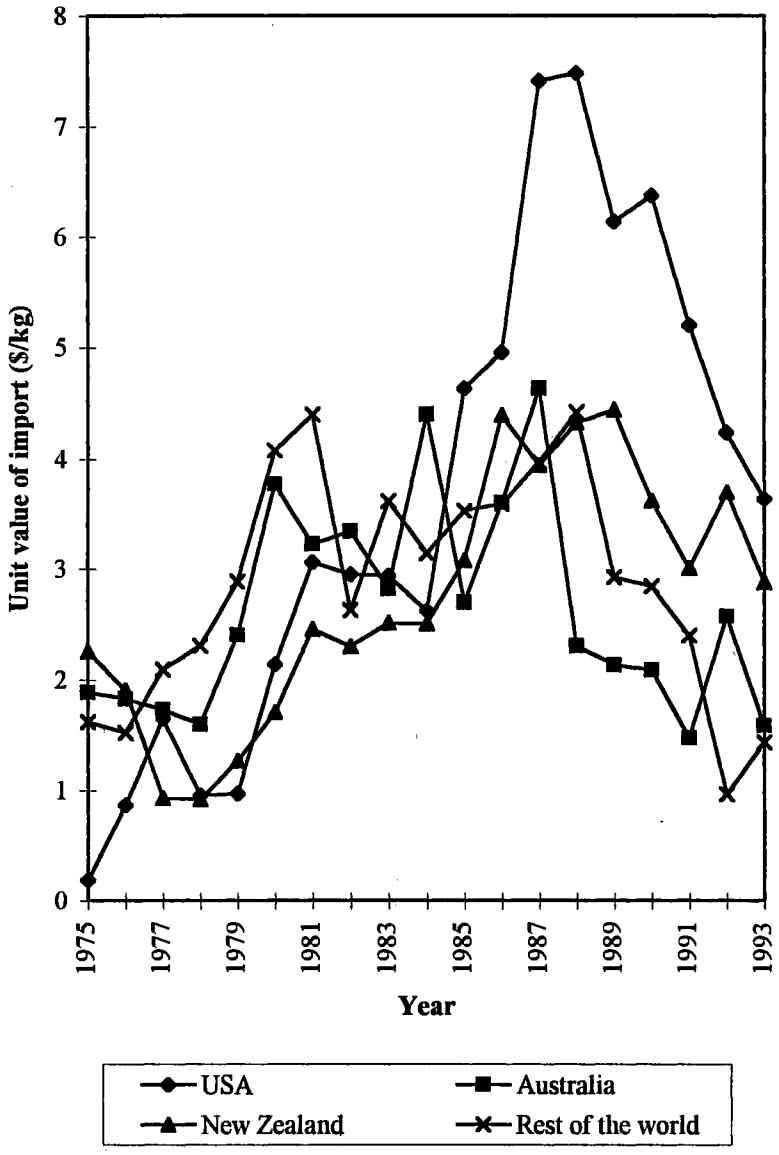

Figure 3. Unit value of Indonesian beef imports, 1975-1993.

Table 1. Bovine meat consumption in the world (1000 mt), 1970-1991.

Country	1970	1975	1982	1987	1991
WORLD	38236	43520	44417	50547	53692
DMEC (Total)	21005	23345	22240	23386	23286
America	1184	13267	12211	12640	12138
Canada	882	1151	1031	1018	1021
United States	10962	12117	11180	11622	11118
Europe	7728	7969	7898	8280	8440
EEC	7092	7275	7207	7593	7742
EFTA	634	693	690	685	697
South Africa	384	523	582	669	708
Asia	373	464	709	915	1234
Japan	312	418	646	842	1169
Oceania	677	1122	839	883	766
Australia	547	960	693	753	660
New Zealand	130	163	147	130	106
Developing Countries :	9939	11211	13126	14631	18592
America	5934	6738	7182	7744	9126
Africa	2025	2065	2874	3070	3260
Asia	1761	2054	2656	4654	5804
West Asia	405	529	759	874	953
South&S.E.Asia	1356	1524	1897	3780	4851
Europe	173	304	373	326	358
Oceania	46	49	41	48	45
Eastern Europe	7007	8613	8616	10328	10213
Socialist Countries of Asia :	285	351	435	990	1600

Source: UNCTAD Commodity Yearbook, 1993.

Table 2. Trade in bovine meat of major exporters and importers (thousand tons).

	1971	1975	1980	1986	1991
Exports					
EEC	573	1115	1585	2183	2580
Australia	339	417	580	477	759
Brazil	89	5	6	80	63
New Zealand	180	192	216	193	289
Argentina	231	75	200	84	100
United States	15	21	64	174	397
Uruguay	80	77	95	128	66
Imports					
United States	518	557	642	630	710
EEC	979	988	1283	1471	1752
Japan	42	45	122	312	353
Asia	18	90	212	368	649
South & South East Asia	n.a.	n.a.	n.a.	101	428

Source: UNCTAD Commodity Year Book, 1985 and 1993.
EEC comprised of 4 countries from 1971 to 1980 and 10 countries in 1986 and 1991.

Table 3. Livestock population by kind (1000 head).

Year	Milk Cow	Cow	Buffalo	Horse	Goat
1975	-	6178.0	2259.0	637.0	7146.0
1979	-	6458.7	2432.2	595.6	7659.5
1983	197.3	8895.4	2397.7	527.4	10969.7
1986	222.3	9516.1	3493.9	715.1	10737.8
1991	305.7	10667.4	3310.9	694.6	11483.4
	Sheep	Pigs	Domestic Hens	Pedigree Hens	Duck
1975	3262.0	2608.0	92704.4	2614.0	14123.6
1979	4071.0	2958.8	99697.0	3144.7	14715.4
1983	4789.4	4235.7	105680.4	35740.2	17069.2
1986	5318.0	6215.9	169105.0	57966.1	26510.9
1991	6108.3	7612.6	208966.2	84373.1	26541.7

Source: Central Bureau Statistics, Jakarta, Indonesia.

Table 4. Expenditure shares of Indonesia meat imports, 1975 to 1993.

Variables	Shares from total meat imports	Shares for each product
Beef	0.66500	1.00000
Unites States	0.18604	0.26802
Australia	0.17154	0.27326
New Zealand	0.19315	0.28443
Rest of the world	0.11427	0.17429
Other meat	0.33500	1.00000

Source : Central Bureau Statistics, Jakarta, Indonesia.

Table 5. Summary statistics of unit value of import for 1975-1993.

Variables	Mean	Standard Dev.	Minimum	Maximum
United States	3599.4	2243.9	186.29	7486.8
Australia	2636.5	955.2	1474.70	4628.8
New Zealand	2744.4	1119.5	917.90	4438.9
Rest of the world	2860.7	1032.3	966.23	4415.9
Other meats	2189.9	2413.0	920.33	12024.0

Table 6. Estimates of marshallian own-price elasticities for selected meat products in the Pacific Rim region from the past studies.

Researcher(s)	Approach	Data Period	Product	Marshal. Own-price
Shue	Single Eq.	1968-84	Pork/Taiwan	-0.56[1]
Shue	Single Eq.	1969-84	Beef/Taiwan	-1.87[1]
Shue	Single Eq.	1968-84	Chicken/Taiwan	-0.28[1]
Seleka	Linear	1970-88	Beef/Hongkong	-0.19
Seleka	Log-linear	1970-88	Beef/Hongkong	-0.73
Hayes,Wahl,&Williams	LA/AIDS	1962-86	Wagyu Beef/Japan	-1.89[1]
Hayes,Wahl,&Williams	LA/AIDS	1962-86	IQ/Japan	-0.46[1]
Hayes,Wahl,&Williams	LA/AIDS	1962-86	Pork/Japan	-0.76[1]
Hayes,Wahl,&Williams	LA/AIDS	1962-86	Chicken/Japan	-0.59[1]
Lambert	LA/AIDS	1974-88	Wagyu Beef/Japan	-1.05[1]
Lambert	LA/AIDS	1974-88	IQ/Japan	-0.58[1]
Hayes,Wahl,&Williams	LA/AIDS	1962-89	Wagyu Beef/Japan	-2.48[1]
Hayes,Wahl,&Williams	LA/AIDS	1962-89	IQ/Japan	-0.98[1]
Hayes,Wahl,&Williams	LA/AIDS	1962-89	Pork/Japan	-0.73[1]
Hayes,Wahl,&Williams	LA/AIDS	1962-89	Chicken/Japan	-0.91[1]
Capps, at. all.	Rotterdam	1968-91	Beef/Taiwan	-0.07
		1968-91	Pork/Taiwan	-0.10
		1968-91	Chicken/Taiwan	-0.02
	Rotterdam	1960-88	Beef/S Korea	-0.17
		1960-88	Pork/S Korea	-0.12
		1960-88	Chicken/S Korea	-0.05
	Rotterdam	1962-91	Beef/Japan	-0.21
		1962-91	Pork/Japan	-0.25
		1962-91	Chicken/Japan	-0.03
Lee, Koo, & Yang	LA/AIDS		Beef/Korea	-0.79[2]
			Pork/Korea	-0.20[2]
Yang & Koo	RSDAIDS	1973-90	Beef/Japan-Aust.	-0.48
		1973-90	Beef/Japan-Others	-0.77
		1973-90	Pork/Japan-Can.	-1.20
		1973-90	Pork/Japan-E.C.	-2.56
		1973-90	Pork/Japan-Others	-1.62
		1973-90	Poultry/Japan-U.S	-2.46
		1973-90	Poultry/Japan-Thailand	-5.60

Note: [1] cited from Capps, Tsai, Kirby and Williams.
[2] estimated Marshallian elasticities after structural changes

Table 7. Marshallian elasticities of Indonesian beef imports using RSDAIDS model.

Countries of Origin	Expenditure Coefficient	Price coefficient			
		U.S.	Australia	New Zealand	Rest of the world
United States	0.3952 (0.1034)**	-0.2859 (0.0998)*	-0.2410 (0.1022)*	0.3799 (0.1017)**	-0.0064 (0.1100)
Australia	1.2027 (0.0708)**	-0.4528 (0.0673)**	-1.3483 (0.1596)**	-0.0099 (0.1005)	0.2103 (0.1243)*
New Zealand	0.6555 (0.1278)**	0.3182 (0.1161)*	0.7580 (0.1778)	-0.8245 (0.2168)**	-0.1342 (0.1775)
ROW	0.9512 (0.1711)**	-0.1162 (0.1778)	0.3132 (0.3029)	-0.2840 (0.2439)	-1.020 (0.4285)*
Price of other meat		-0.2417 (0.1372)	0.3995 (0.1342)**	-0.0908 (0.2028)	0.1562 (0.3484)

R^2 : 0.9372

Auxiliary Regression of Total Expenditure:

$Ln(E/P^T) = 24.22 - 0.37*lpusa + 0.08*lpaust - 0.80*lpnzea - 0.84*lprow -$
(5.39) (0.17) (0.21) (0.23) (0.25)

$0.42*lpomeat + 1.35*cpi + 0.55*gnp + 0.12*reeer$
(0.19) (1.02) (0.74) (0.77)

$R^2 = 0.96$ DW = 2.36

Note: Single and double asterisks (*) denote significance at the 5 percent and 1 percent level respectively. The values in parenthesis are standard deviation.

Table 8. Uncompensated or Hicksian elasticities from SUR estimation of RSDAIDS model.

Countries of Origin	Expenditure Coefficient	Price coefficient			
		U.S.	Australia	New Zealand	Rest of the world
United States	0.3952 (0.1034)**	0.2124 (0.0950)*	-0.1732 (0.1015)	0.4562 (0.1475)**	0.0388 (0.1270)
Australia	1.2027 (0.0708)**	-0.2291 (0.0568)**	-1.1420 (0.1394)**	0.2224 (0.0858)**	0.3477 (0.1122)*
New Zealand	0.6555 (0.1278)**	0.4401 (0.1140)**	0.8704 (0.1777)**	-0.6979 (0.2103)**	-0.0593 (0.1830)
ROW	0.9512 (0.1711)**	0.0608 (0.1706)	0.4764 (0.3021)	-0.1003 (0.2380)	-0.9113 (0.4448)*
Price of other meat		-0.1093 (0.1458)	0.0034 (0.1231)	0.1288 (0.2155)	0.4749 (0.3542)

Note: Single and double asterisks (*) denote significance at the 5 percent and 1 percent level respectively. The values in parenthesis are standard deviation.

CHAPTER V

SUMMARY and CONCLUSIONS

This study provides HVFP exporters with a foundation from which they can develop objectives, strategies and tactics so they can reach their export market potential in Indonesia. The environmental analysis becomes the foundation for marketing objectives, strategies to achieve the objectives, and tactical decision making.

The environmental analysis in the first chapter provides the information about the dynamics of the Indonesian market, and of social, cultural, and political environments. The rapid changes in Indonesian economic and political development make it necessary to continuously evaluate the environment and its impact on marketing plan. Market survey results and import demand analysis for fruit and beef provide further information about decision makers in the market, decision criteria, product modifications, channels of distribution, and competition in the market.

The cultural analysis concludes that exporters should be aware of the diversity of Indonesian culture, social and ethnic division, the Javanese predominance in the government, the importance of political connections in business in Indonesia, the four major religions, principles of Pancasila, political parties, and form of the government. The second and the third sections of the first chapter showed the market potential indicated by economic, population, and tourism growth. Despite regional and international trade agreements, the government of Indonesia still imposes some limits to

open markets and does not allow free competition in all markets. Import liberalization will continue. Protection is most likely for monopolies with political relationships.

The physical distribution systems are an important factor limiting successful marketing in Indonesia. The ability to have direct control distribution or a local distributor firm with a bigger market reach is a key to increasing sales in Indonesia. Newspaper, magazine, radio, and television are media available in Indonesia and can be used for advertising. Deregulation and privatization in many sectors in the economy have shown their positive impact on the Indonesian economy. Foreign investment approval growth in 1994 is an indication of the more open economic policy.

The U.S. faces strong competition for many agricultural products in Indonesia especially from Australia, New Zealand and European Union (EU). Australia and New Zealand's governments and producer marketing boards are the greatest supporters of agricultural product promotion in the Asian region. Australia's most promoted product in the region is red meat, followed by fruits, wheat, barley, beer, and wine. New Zealand promotes fruits, meats, and dairy products. European Union (EU) marketing organizations and governments also are highly involved in trade shows and retail promotions. Other nations also have expanded their interests in Asia by opening additional regional offices.

The top commodities for USDA non-price promotion program from 1991 through 1993 were fresh and processed fruits, vegetables, wine, red meats, poultry, seafood, and cotton. Indonesia ranked eight in promotion expenditures from 1991 to 1993.

The strong competition from Australia and New Zealand for high value food products will continue in the future in Indonesian market. U.S food suppliers have to be able to maintain and increase their market share if they are willing to take advantage

of market opportunities for some high value food products. The results of the market surveys and import demand analysis of the fruit market in Indonesia, the U.S. fruit will experience continuing market growth as income in Indonesia increases. Even though, U.S. fruits have been recognized by most of Indonesia, trade servicing, technical assistance, public relations, and consumer promotion are still needed in the Indonesian market. The results support McCracken, Tansuhaj, O'Rourke and Walter's that a more active role in exporting apples for apple firms is needed. In addition to the core product, the auxiliary services such as brands, packages, and facilitating service need to be addressed. In the Indonesian fruit market, brands and packages were found to be a source of advantage for U.S. suppliers. However, infrastructure and facilitating service development is still needed.

In the fruit market, U.S. fruits (oranges, apples, and grapes) have strong positions. Overall, expenditure elasticities on U.S. fruit are more elastic than the rest of the world that means as fruit imports increase, Indonesia imports more from U.S. than from the rest of the world. Among oranges, grapes, and apples, expenditure on U.S. apples is the most elastic. Given elastic income elasticity for apples from U.S. and elastic price elasticities for oranges, grapes, and apples from U.S., the U.S. can still increase its market share especially in the apple market. Moreover, any policy that can lead to price reduction of oranges, grapes, and apples imported from U.S. will increase revenues to U.S. exporters. In the beef market, beef from Australia has the strongest position. Australian beef is cheaper than U.S. beef.

Important factors contributing to development of high value food products in Indonesia are the high income segment, tourism industry, fast-food industry, and growing supermarket and mega-market industries. The growth of five big cities: Jakarta,

Bandung, Surabaya, Semarang, and Medan, are higher than national growth and gives the opportunities for fast food and supermarket industry development. Research on the effects of export promotion programs for meat, dairy products, fruit, and grocery products in Indonesia is still needed.

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APPENDIX 1

The Agriculture Ministerial Decree No. 745/Kpts/tn. 240/12/1992 dated December 30, 1992. This is a condensed form of the Decree. For detailed information, please consult the original Decree.

1. Importation of meat is not restricted and can be done by any recognized importer. Technical requirements for the importation of meat includes :
   a. country of origin
   b. abatoir of origin
   c. quality of meat
   d. method of slaughtered
   e. packaging
   f. transportation
2. Country of origin should be free of Foot and Mouth Disease for at least the last 12 months, and within the last 3 years no vaccination against Foot and Mouth Disease and Rinderpest
3. For the importation of pork, country of origin should be free for at least 12 months and be declared of Transmissible Gastro Entritis, Trichnosis, and Cysticercosis.
4. Abatoir of origin should meet recognized standards at least the Indonesian Class A, and should be under supervision of qualified vetenararian.

5. Except for pork and meat destined for animal feed, all imported meat should originate from the slaughtering of animals in accordance with Islamic Sharia.
6. Imported meat should be packaged meeting the following factors:
   a. packaged and sealed in country of origin
   b. shows the Vetenaray Control number
   c. shows the date of slaughter
   d. shows type and quality of meat
7. There should be no transhipment in the transportation meat from country of origin to Indonesia. Should transhipment be unavoidable, special permits will be issued on request.
8. Containers (transporting meat) should be sealed by a qualified vetenararian, and should be opened by a quarantine official in Indonesia. Certified Halal (Kosher) meat should not be transported in the same container with other meat. Temperature should be regulated as not to damage the meat.
9. Meat for animal feed, should be distinctly colored and marked and not mixed with other meat.
10. Procedure for the importation of meat:
    a. Qualified general importers wishing to import meat should submit a written request to the Director General of Animal Production, Ministery of Agriculture with the information on country of origin, abatoir of origin with the Vetenaray Control number, mode of consumption of imported meat, quantity, type and quality of the imported meat.
    b. At the latest 14 days after submission of request, the Director General will issue a permit or will turn down the request. The import permit will contain quantity

and other specifications as mentioned in the request, and will also specify the period of time allowed for the importation of meat as well as other requirements regarding health, etc. Copies of the import permit will be sent to related institution such as Quarantine, Customs.

c. Upon arrival of the meat, importer should notify Quarantine and undergo quarantine procedures which include:

   1) completeness of all required documents

   2) organoleptic tests

   3) laboratory tests if organoleptic tests shows necessary

d. A certificate will be issued based upon satisfactory result of the quarantine procedure. The certified meat is ready for distribution in Indonesia.

e. Random spot checks will be conducted 4 times annually on the following to guarantee that all requirements for the importation of meat are met :

   1) qualification and performance of the importer

   2) qualification of country of origin and abatoirs

   3) storage and transportation facilities

   4) brand names, type and quality of meat

f. To enable the proper conduct of the checks, importer and distributor of imported meat should report on his storage, transportation and retail facilities.

2

VITA

Sri Rejeki Muji Andayani

Candidate for the Degree of

Doctor of Philosophy

Title: INDONESIAN HIGH VALUE FOOD PRODUCT MARKET ANALYSIS

Major Field: Agricultural Economics

Biograpical:

Personal Data: Born in Tasikmalaya, Indonesia, May 8, 1964, the son of Mr. H. M. Karsono and Mrs. Sunaryati

Education: Graduated from SMA 2, Tasikmalaya, Indonesia, in May 1983; received Sarjana of Agricultural Engineering from Bogor Institute of Technology, Bogor, Indonesia in March, 1988; received Master of Science degree in Agricultural Economics at Oklahoma State University in December, 1992; completed requirements for the the Doctor of Philosophy degree at Oklahoma State University in December, 1995.

Professional Experience: Graduate Research Assistant, Department of Agricultural Economics, Oklahoma State University, September 1992 to September 1995. Project supervisor of PT Karya Mukti, Bandung, Indonesia, April 1988 to May 1989.

Honors: Recognition from The Honor Society of Agriculture, Gamma Sigma Delta. Recipient of the Spillman Scholarship in 1995.

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 05-18-93 **IRB#:** AG-93-024

Proposal Title: U.S. HIGH VALUE FOOD EXPORT POTENTIAL IN INDONESIA

Principal Investigator(s): Daniel S. Tilley, Gita Indahsari, Sri Andayani

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

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